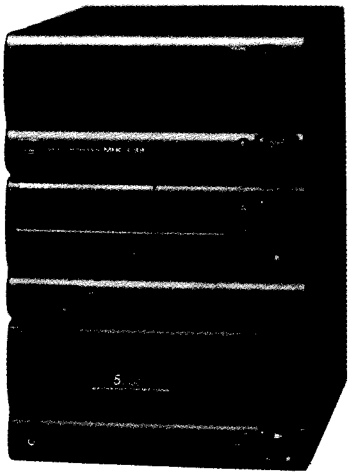
HCD-C33

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
PX Model



- **HCD-C33 is the tuner, CD, deck and amplifier in MHC-C33**

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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SPECIFICATIONS

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM33-5BD3B
	Base Unit Name	BU-5BD3B
Tape deck Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM202WR2

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6 ohm loads both channels driven, from 80 – 20,000 Hz; rated 30 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

CD player section

System	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz
Signal-to-noise ratio	More than 95 dB
Dynamic range	More than 90 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	For East European, CIS model 65 – 74 MHz 87.5 – 108.0 MHz For other countries model 87.5 – 108.0 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range		For US, Canadian, Mexican model
	AM:	530 – 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 – 1,710 kHz (with the AM tuning interval set at 9 kHz) For Italian model 522 – 1,611 kHz For German model 531 – 1,602 kHz For AEP, UK model MW: 531 – 1,602 kHz LW : 153 – 279 kHz For E, Saudi Arabia, Malaysia, Singapore, Australian, Tourist, PX model
	MW:	531 – 1,602 kHz (with the MW tuning interval set at 10 kHz)
	SW:	5,95 – 17,90 MHz For EE, CIS model MW: 531 – 1,602 kHz LW : 153 – 279 kHz
Antenna		AM loop antenna External antenna terminals
Intermediate frequency		450 kHz

Amplifier section

For US, Canadian, Mexican model
Continuous RMS power output:
30 + 30 watts (6 ohms, at 80 – 20,000 Hz, 0.9% THD)
35 + 35 watts (6 ohms, at 1 kHz, 5% THD)
For AEP, German, Italian, East European, CIS model
Continuous RMS power output
35 + 35 watts (6 ohms at 1 kHz, DIN)
38 + 38 watts (6 ohms at 1 kHz, 5% THD)
Music power output
40 + 40 watts (6 ohms at 1 kHz, 10% THD)
For E, Saudi Arabia, Malaysia, Singapore, Australian, PX, Tourist model
Peak music power output
350 watts
Continuous RMS power output
35 + 35 watts (6 ohms at 1 kHz, DIN)
38 + 38 watts (6 ohms at 1 kHz, 5% THD)

—Continued on next page—

MICROFILM

MINI HiFi COMPONENT SYSTEM

SONY®

Inputs
For US, Canadian, Mexican, E, Saudi Arabia, Malaysia, Singapore, Australian, PX model
  MD/VIDEO IN
    sensitivity 450 mV,
    impedance 47 kilohms
For other Countries model
  PHONO (phono jack):
    sensitivity 5 mV,
    impedance 47 kilohms
Outputs
  HEADPHONES (stereo minijack):
    accepts headphones of 8 ohms or more.
  SPEAKER:
    accepts speakers of 6 to 16 ohms.

Tape player section

Recording system
  4-track 2-channel stereo
Frequency response
  (DOLBY NR OFF)
  40 – 13,000 Hz (±3 dB),
  using Sony TYPE I cassette
  40 – 14,000 Hz (±3 dB),
  using Sony TYPE II cassette
Wow and flutter
  0.1% WRMS±0.3% (DIN)

Supplied accessories

AM loop antenna (1)
Remote commander RM-S343 (1)
Sony SUM-3 (NS) batteries (2)
FM antenna (1)
Speaker cords (2)

General

Destination	Power requirements	Power consumption
US	120V AC 60Hz	80Watts
Canadian Mexican	120V AC 60Hz	90Watts
AEP German Italian East European CIS	220 – 230V AC 50/60 Hz	70Watts
UK	240V AC 50Hz	70Watts
E Saudi Arabia Malaysia Singapore Australian PX	110 – 120V or 220 – 240V AC Adjustable 50/60Hz	90Watts

Dimensions

For US, Canadian, Mexican model
  Approx. 225 x 330 x 320 mm (w/h/d)
  (8 7/8 x 13 x 12 5/8 inches)
Mass Approx. 9 kg
  (19 lb 13 oz)
For other countries model
  Approx. 225 x 325 x 320 mm (w/h/d)
  (8 7/8 x 12 7/8 x 12 5/8 inches)
Mass Approx. 9 kg
  (19 lb 13 oz)

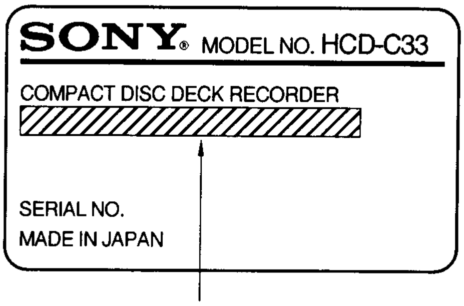
Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MODEL IDENTIFICATION

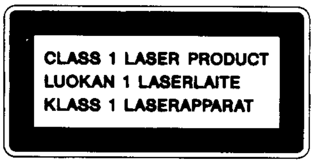
— Specification Labels —



US, Canadian, Mexican model : AC : 120V 60Hz
AEP, German, Italian,
CIS, East European model : AC : 220—230V~50/60Hz
UK model : AC : 240V~50Hz
E, Saudi Arabia, Malaysia,
Singapore, Australian, PX model : AC : 110—120V/220—240V~50/60Hz

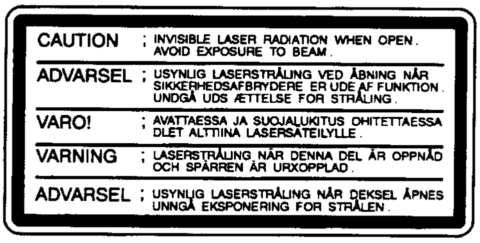
CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

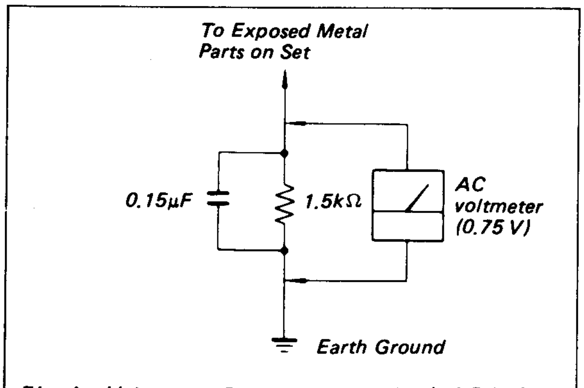


Fig. A. Using an AC voltmeter to check AC leakage.

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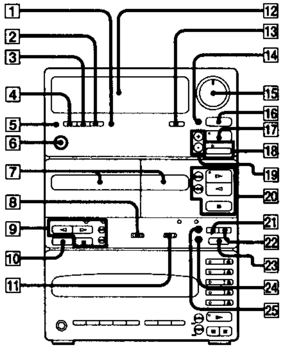
Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

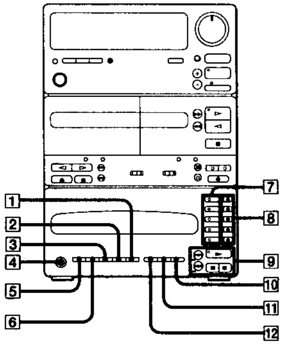
Front Panel

Amplifier/Tuner/Tape player section



1 CLOCK SET button (6)
2 REC TIMER button (20)
3 DAILY button (19)
4 TIMER SET button (19)
5 Remote sensor
6 SYSTEM POWER switch (6)
7 Cassette compartments (13)
8 DIRECTION mode selector (13)
9 Tape operating buttons (for deck A)
  ▷ (front side play)* (13)
  ◁ (reverse side play)* (13)
  ■ (stop) (13)
  ▶▶ (fast rightward) (13)
  ◀◀ (fast leftward) (13)
10 ⏏ EJECT button (for deck A) (13)
11 DOLBY NR switch (13)
12 Display window (6, 7, 11, 15, 18, 19)
13 EQ PRESET button (18)
14 MEMORY/NEXT button (6, 12, 20)
15 VOLUME control (5, 8, 18)
16 FUNCTION button (7, 14, 21)
17 TUNER/BAND button (11, 16)
18 PRESET/TUNING button and PRESET indicator (11)
19 TUNER/TIMER (+/–) buttons (6, 11, 20)
20 Tape operating buttons (for deck B)
  ▷ (front side play)* (13)
  ◁ (reverse side play)* (13)
  ■ (stop) (13)
  ▶▶ (fast rightward) (13)
  ◀◀ (fast leftward) (13)
21 HIGH SPEED DUBBING button* (17)
22 CD SYNCHRO button* (14)
23 ⏏ EJECT button (for deck B) (13)
24 REC ○ button* (15)
25 PAUSE ⏸ button* (13)

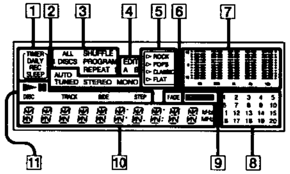
CD player section



1 MUSIC SCAN button (8, 9)
2 REPEAT button (10)
3 PROGRAM button (9, 16)
4 HEADPHONES jack (stereo minijack) (18, 21)
5 CONTINUE button (8, 15)
6 SHUFFLE button (9)
7 DISC 1 — 5 buttons* (7, 8)
8 OPEN/CLOSE ⏏ buttons (7, 14)
9 CD player operating buttons
  ▶ (play) (8, 15)
  ⏸ (pause) (8, 15)
  ■ (stop) (8, 14)
  ⏮ ◀◀ ▶▶ ⏭ (manual search/AMS) (8)
10 EDIT button (15)
11 CLEAR button (10)
12 CHECK button (10)

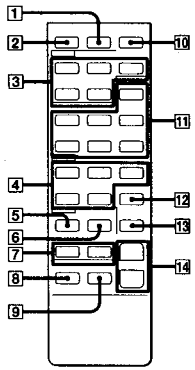
Display Window

HCD-C33



1 Timer indication (19)
2 Tuner indication (11)
3 CD play mode indication (7)
4 CD editing mode indication (10, 15)
5 Audio emphasis indication (18)
6 Fade synchro recording indication
7 Spectrum analyzer (18)
8 Music calendar/preset radio station numbers (7, 12)
9 MEMORY indication (12)
10 Frequency/playing time/tape counter indications (7, 11, 15)
11 CD play status indication (7)

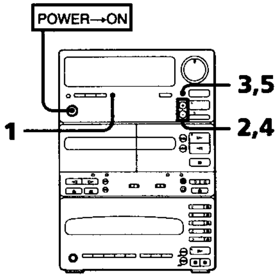
Remote commander



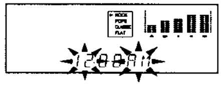
1 SLEEP button (19)
2 FUNCTION button (7, 14, 21)
3 Deck A operating buttons (13)
4 CD operating buttons (7, 8)
5 BAND button (11)
6 STEREO/MONO button (11)
7 PRESET –/+ buttons (12)
8 CLOCK DISPLAY button (6)
9 EQ PRESET button (18)
10 SYSTEM POWER button (6)
11 Deck B operating buttons (13)
12 DISC SKIP button (7)
13 TIME button (8)
14 VOL +/– buttons (8, 18)

Setting the Clock

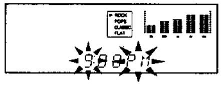
The built-in clock shows the time in the display even if the power is off. You need to set the clock to enjoy the timer-activated features of your stereo system.
Use the buttons on the unit to do this operation.



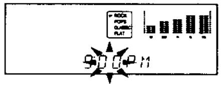
1 Press CLOCK SET.
The "AM" and hour indication begin flashing.



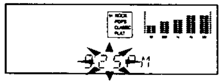
2 Set the current hour by pressing TUNER/TIMER (+/–) until the correct hour appears.



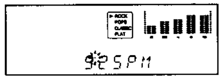
3 Press MEMORY/NEXT.
The minutes indication begins flashing.



4 Set the current minute by pressing TUNER/TIMER (+/–) until the correct minute appears.



5 Press MEMORY/NEXT.
The clock starts running and the upper dot flashes.
Use the time signal to set the clock accurately.



To check the time while power is on
Press CLOCK DISPLAY on the remote commander.
The current time appears for a few seconds.

To correct the clock setting
Repeat steps 1 to 5.

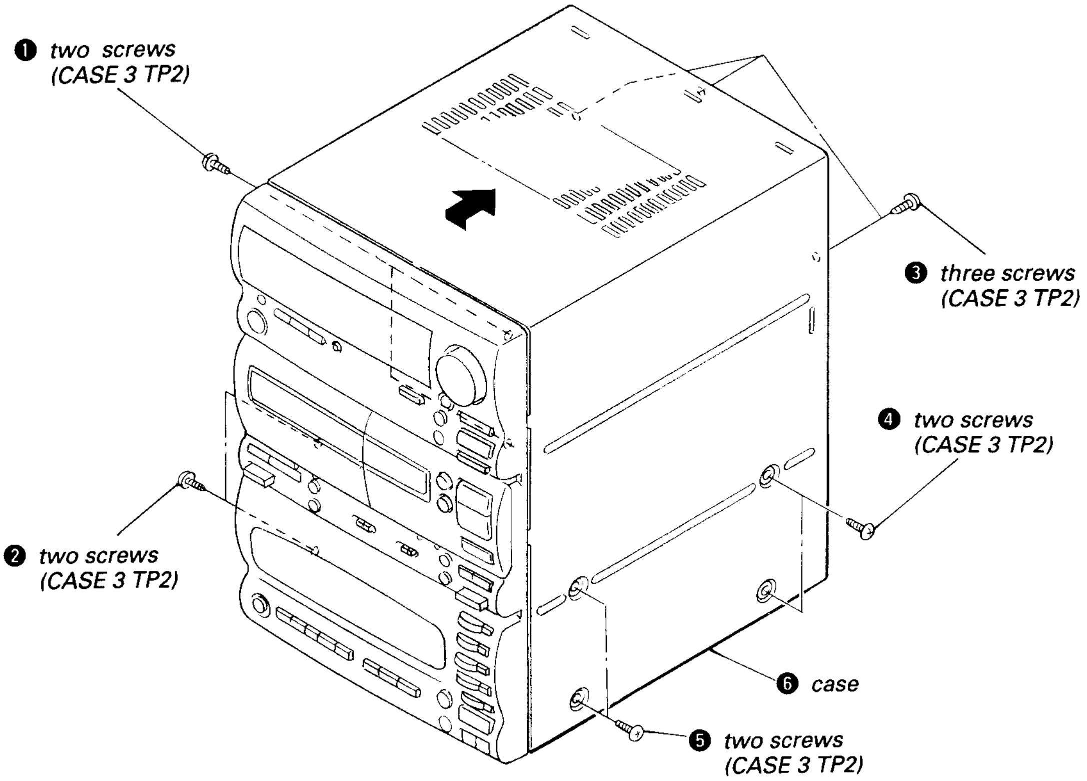
SECTION 1
GENERAL

This section is extracted
from instruction manual.

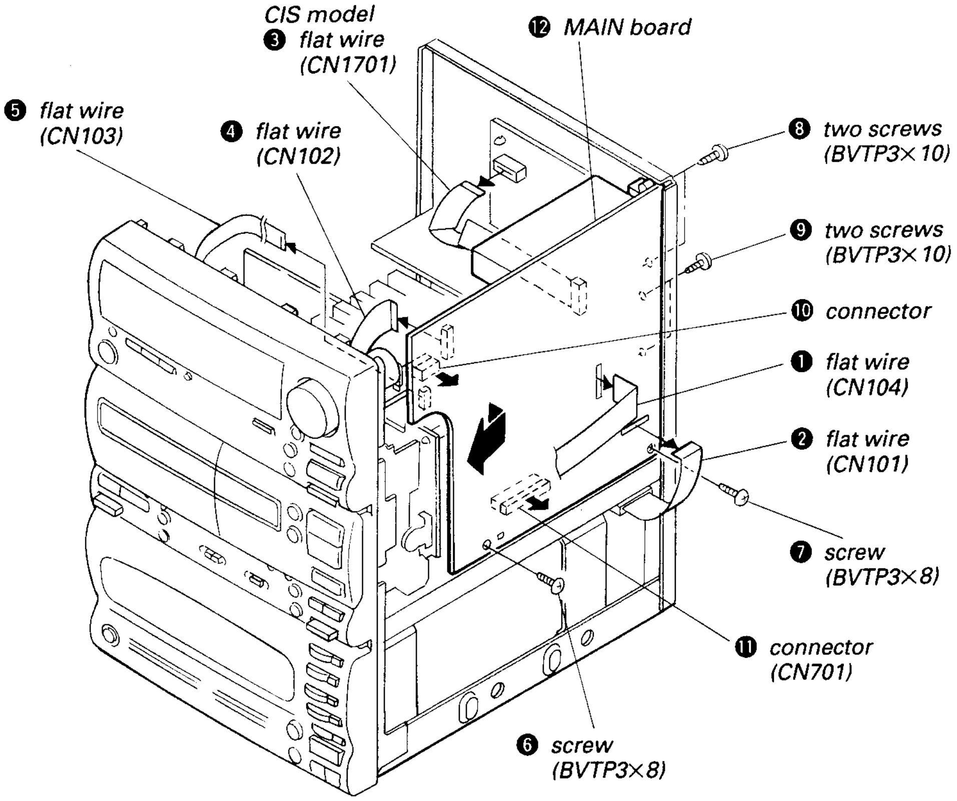
SECTION 2
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

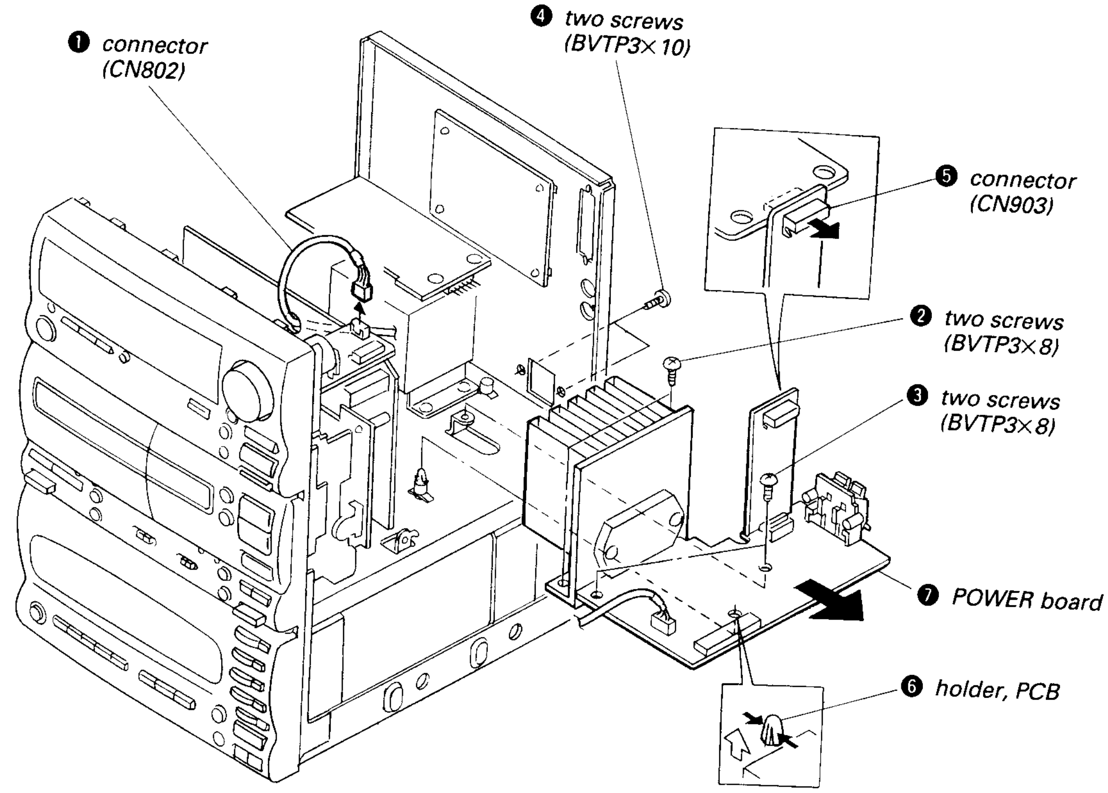
2-1. CASE


❶ two screws
(CASE 3 TP2)
❷ two screws
(CASE 3 TP2)
❸ three screws
(CASE 3 TP2)
❹ two screws
(CASE 3 TP2)
❺ two screws
(CASE 3 TP2)
❻ case

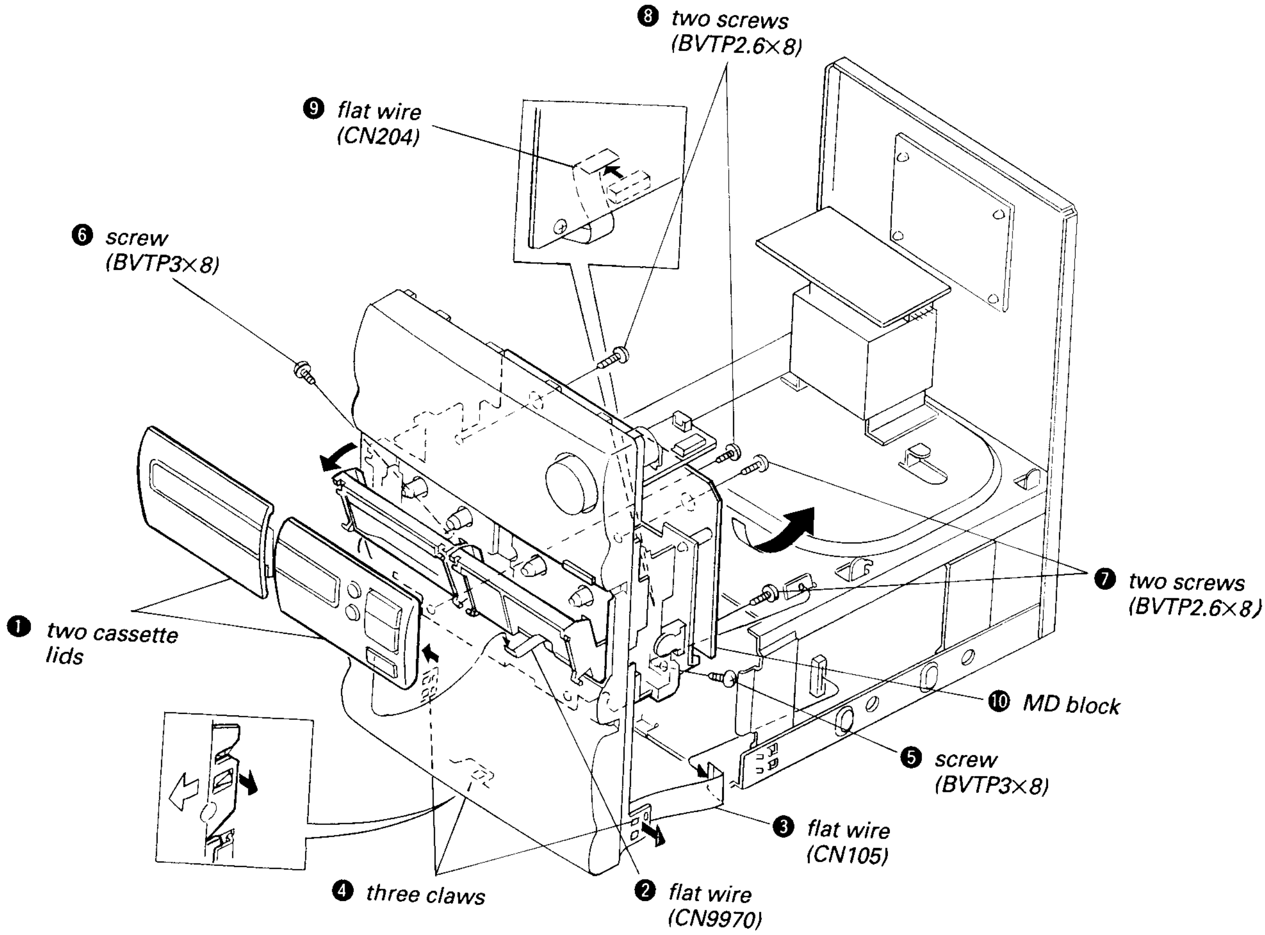
2-2. MAIN BOARD


CIS model
❸ flat wire
(CN1701)
⓬ MAIN board
❺ flat wire
(CN103)
❹ flat wire
(CN102)
❽ two screws
(BVTP3×10)
❾ two screws
(BVTP3×10)
❿ connector
❶ flat wire
(CN104)
❷ flat wire
(CN101)
❼ screw
(BVTP3×8)
⓫ connector
(CN701)
❻ screw
(BVTP3×8)

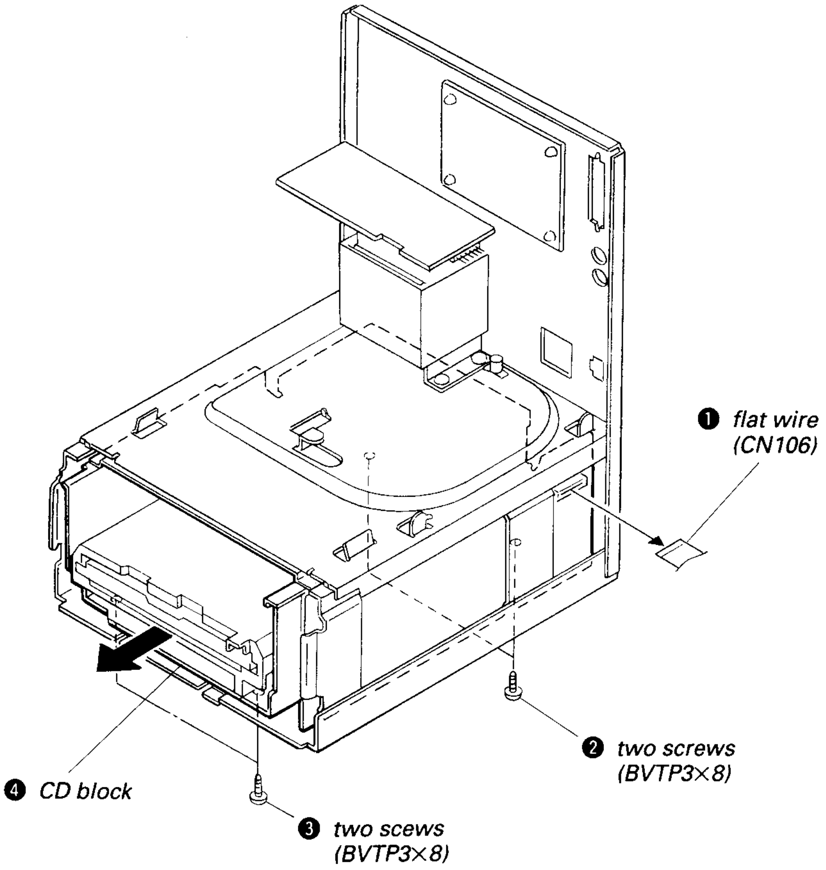
2-3. POWER BOARD


❶ connector (CN802)
❹ two screws (BVTP3×10)
❺ connector (CN903)
❷ two screws (BVTP3×8)
❸ two screws (BVTP3×8)
❼ POWER board
❻ holder, PCB

2-4. FRONT PANEL, MD BLOCK


❽ two screws (BVTP2.6×8)
❾ flat wire (CN204)
❻ screw (BVTP3×8)
❼ two screws (BVTP2.6×8)
❶ two cassette lids
❿ MD block
❺ screw (BVTP3×8)
❸ flat wire (CN105)
❹ three claws
❷ flat wire (CN9970)

2-5. CD BLOCK


❶ flat wire
(CN106)
❷ two screws
(BVTP3×8)
❸ two scews
(BVTP3×8)
❹ CD block

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback/erase head	pinch roller
rubber belts	capstan
idlers	

2. Demagnetize the record/playback head with a head demagnetizer. (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	28 to 60g • cm (0.39 to 0.83oz • inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.028 to 0.083 oz • inch)
Reverse	CQ-102RC	28 to 60g • cm (0.39 to 0.83 oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.028 to 0.083 oz • inch)
FF/REW	CQ-201B	70 to 140g•cm (0.98 to 1.94 oz•inch)

3-2. ELECTRICAL ADJUSTMENTS

•TOOLS

Description	Part No.	Remarks
21P L=500 (1mm)	J-2501-075-A	Extension Cable (MAIN board CN102 to FL board CN901
7P L=500 (1.25mm)	J-2501-058-A	Extension Cable (MAIN board CN103 to FL board CN902
19P L=300 (1.25mm)	J-2501-011-B	Extension Cable (MAIN board CN104 to CD board CN106

TAPE SECTION

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
   - Switch position

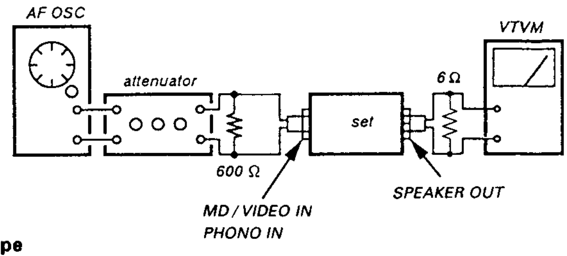
     DOLBY NR switch : OFF
     DIRECTION switch : ⇄
     EQ PRESET switch : OFF
   - Standard output position :

     Deliver the follow input signal level to input jack and set the VOLUME control to obtain the follow output signal level.
   - Input Level

     MD / VIDEO IN : 0.549V (–3dB)
     PHONO IN : 5.49mV (–43dB)
   - Output Level

     SPEAKER OUT : 0.775V (0dB)

– Record Mode –



Test Tape

Tape	Contents	Use
P-4-A100	10kHz, – 10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

Test Mode

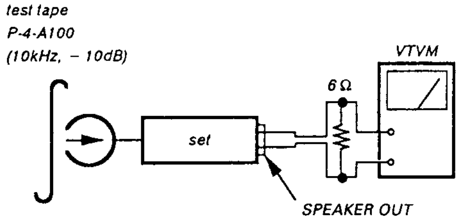
1. Short the JW998 and JW999, before electrical adjustment. At first, all the fluorescent tubes light up, then the system returns to normal display.
2. To release the test mode, remove the short plug and turn off the power switch.
3. Remove the short plug after completion of adjustment.

Record/Playback Head Azimuth Adjustment

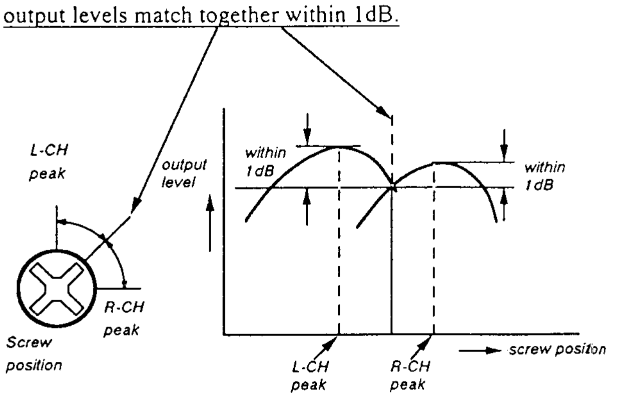
DECK-A DECK-B

Procedure :

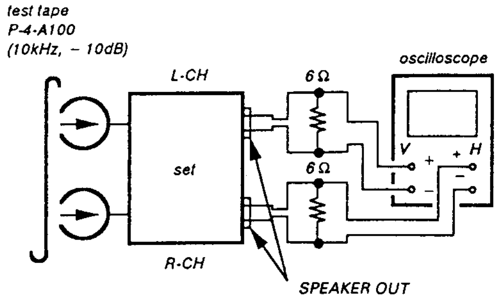
1. Forward playback Mode

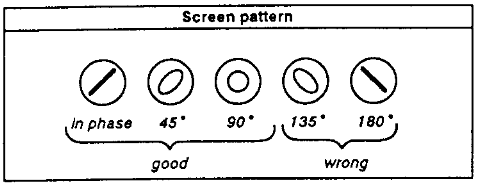


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



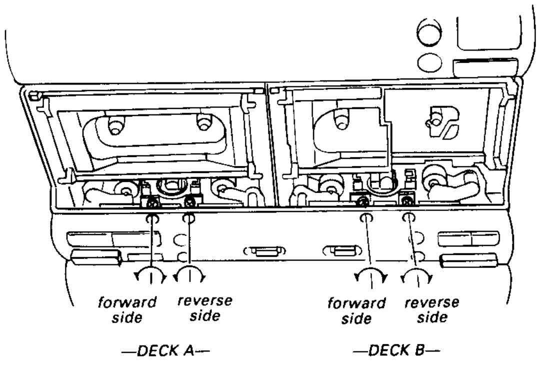
3. Playback Mode


test tape
P-4-A100
(10kHz, - 10dB)
L-CH
6Ω
oscilloscope
set
6Ω
V
H
R-CH
SPEAKER OUT


Screen pattern
In phase
45°
90°
135°
180°
good
wrong

4. Change the reveres playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

Adjustment Location : – record/playback head –

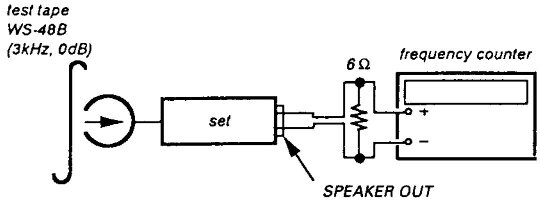

forward side
reverse side
forward side
reverse side
—DECK A—
—DECK B—
adjustment screws

Tape Speed Adjustment

DECK-A **DECK-B**

Procedure :

– Forward Playback Mode –


test tape
WS-48B
(3kHz, 0dB)
6Ω
frequency counter
set
+
–
SPEAKER OUT

(high speed adjustment)
1. Connect ㉖ pin of IC801 to ground.
2. Set to FWD playback mode.
3. Press the SYNCRO DUBBING switch.
4. Adjust RV652 so that the frequency counter reading becomes 6000 ± 30Hz.

(normal speed adjustment)
1. Set to FWD playback mode.
2. Adjust RV651 so that the frequency counter reeding becomes 3,000 ± 10Hz.

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between the deck-A and deck-B the beginning of the tape should be within 1.5%.

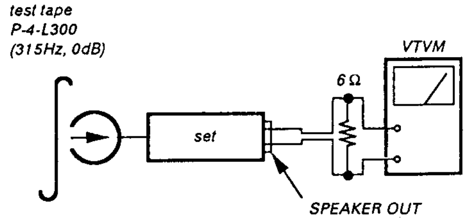
Adjustment Location : AUDIO board

Playback Level Adjustment

DECK-A **DECK-B**

Procedure :

– Forward Playback Mode –


test tape
P-4-L300
(315Hz, 0dB)
VTVM
6Ω
set
SPEAKER OUT

Adjust deck-A is RV311(L-CH) and RV411(R-CH), deck-B is RV301(L-CH) and RV401(R-CH) so the VTVM reading becomes the adjustment limits below.

Adjustment Value :
LINE OUT level : -3.9 ± 1.5dB (0.417 to 0.587V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO board

Record Bias Adjustment

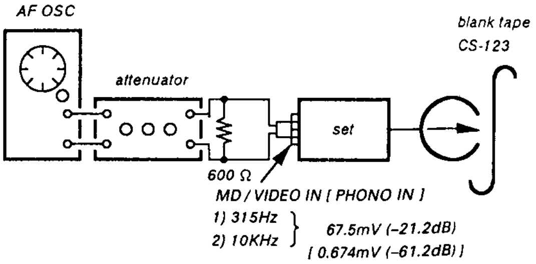
DECK-B

Setting :

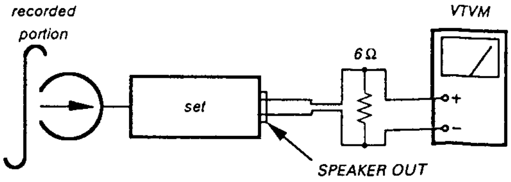
REC LEVEL control : standard record position (Refer to page 7.)

Procedure :

1. FUNCTION : MD/VIDEO (PHONO) position
   — Record Mode —


AF OSC
blank tape
CS-123
attenuator
set
600 Ω
MD / VIDEO IN [PHONO IN]
1) 315Hz
2) 10KHz
67.5mV (-21.2dB)
[0.674mV (-61.2dB)]

2. FUNCTION : TAPE position
   — Playback Mode —


recorded portion
VTVM
6Ω
set
+
–
SPEAKER OUT

Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV341(L-CH), RV441(R-CH) and repeat the steps given above.

Adjustment Location : AUDIO board

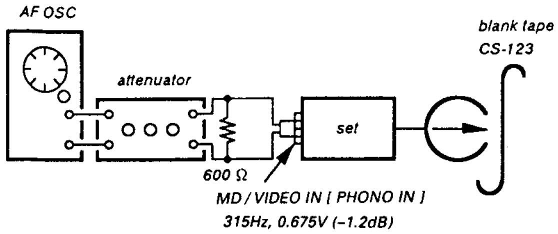
Record Level Adjustment **DECK-B**

Setting :

Procedure :

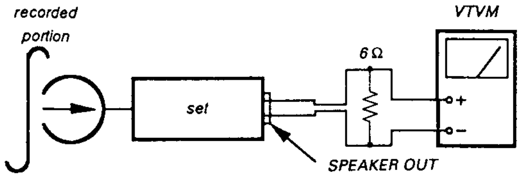
1. FUNCTION : MD/VIDEO (PHONO) position

— Record Mode —


AF OSC
attenuator
600 Ω
set
blank tape
CS-123
MD / VIDEO IN [PHONO IN]
315Hz, 0.675V (-1.2dB)
[6.749mV (-41.2dB)]

2. FUNCTION : TAPE position

— Playback Mode —


recorded
portion
set
6 Ω
VTVM
+
−
SPEAKER OUT

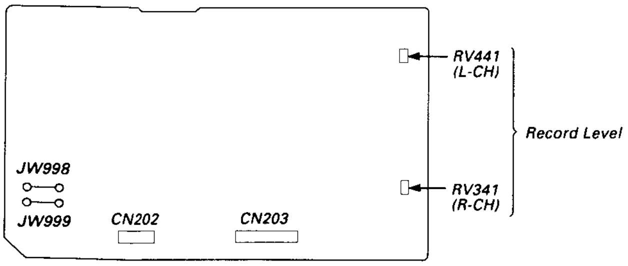
Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV441 (L-CH), RV341 (R-CH) and repeat the steps 1 and 2.

Adjustment Value :
MD/VIDEO OUT level : -1.2 ± 1.5dB (0.568 to 0.8V)

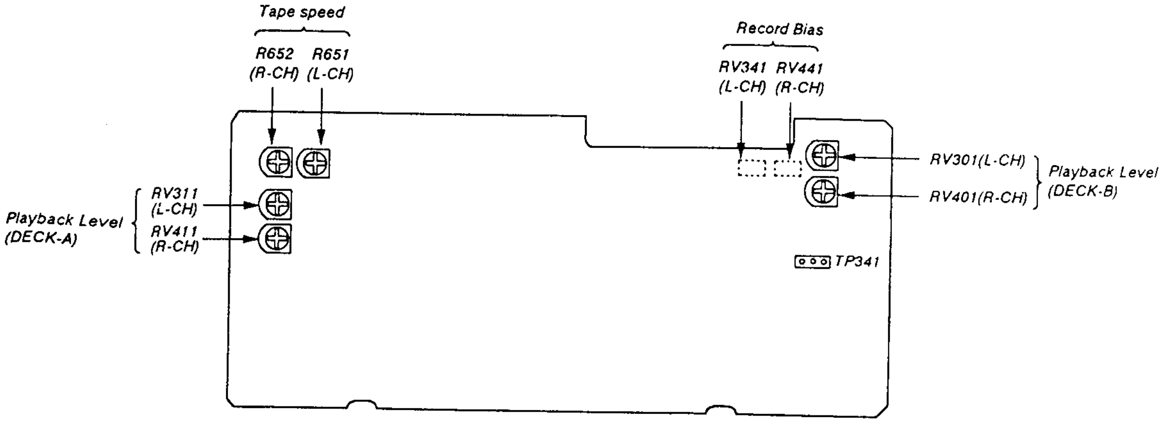
Adjustment Location : TC board

Adjustment Location :

[TC BOARD] (Component side)


RV441
(L-CH)
Record Level
RV341
(R-CH)
JW998
JW999
CN202
CN203

[AUDIO BOARD] (Component side)


Tape speed
R652
(R-CH)
R651
(L-CH)
Record Bias
RV341
(L-CH)
RV441
(R-CH)
RV301(L-CH)
RV401(R-CH)
Playback Level
(DECK-B)
Playback Level
(DECK-A)
RV311
(L-CH)
RV411
(R-CH)
TP341

RADIO SECTION

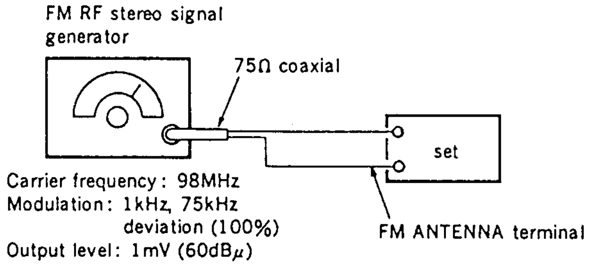
Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

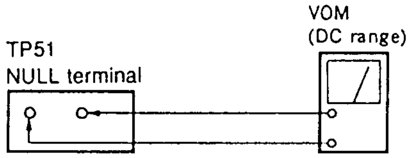
FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting :
BAND : FM


FM RF stereo signal
generator
75Ω coaxial
set
FM ANTENNA terminal

Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz
deviation (100%)
Output level : 1mV (60dBμ)


TP51
NULL terminal
VOM
(DC range)

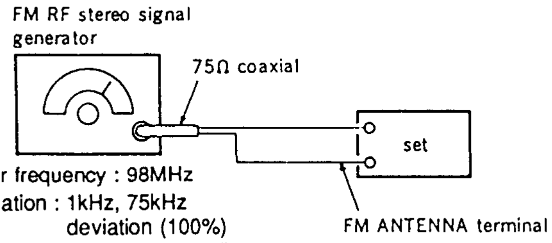
Procedure :

1. Tune the set to 98MHz.
2. Adjust IFT51 for 0Vdc reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level

Setting :
BAND : FM


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

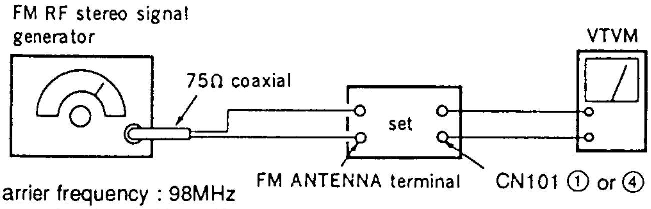
Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz deviation (100%)
Output level : 0.018mV (25dBμ) (CND, AEP, SP model)
0.013mV (22dBμ) (G, IT model)

Procedure :

1. Tune the set to 98MHz.
2. Adjust RV52 so that the TUNED indicator goes on.

FM Stereo Separation Adjustment

Setting :
BAND : FM


FM RF stereo signal generator
75Ω coaxial
set
VTVM
FM ANTENNA terminal
CN101 ① or ④

Carrier frequency : 98MHz
Output level : 1mV (60dBμ)

Modulation :		
	L+R	33.75kHzdeviation
	L−R	33.75kHz deviation
	Pliot Siganl 19kHz	7.5kHz deviation
	(EXCEPT G, IT model)	
	L+R	20kHz deviation
	L−R	20kHz deviation
	Pliot Siganl 19kHz	7.5kHz deviation
	(G, IT model)	

Procedure :
Tune the set to 98MHz.

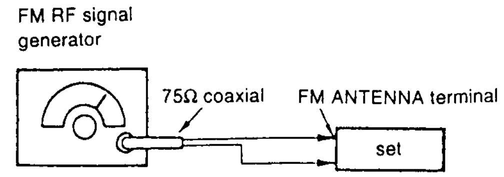
FM stereo Signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV53 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV53 for minimum reading.

L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separation : Ⓒ − Ⓓ

The separations of both channels should beequal.

FM POLAR Adjustment

Setting :
BAND switch : FM

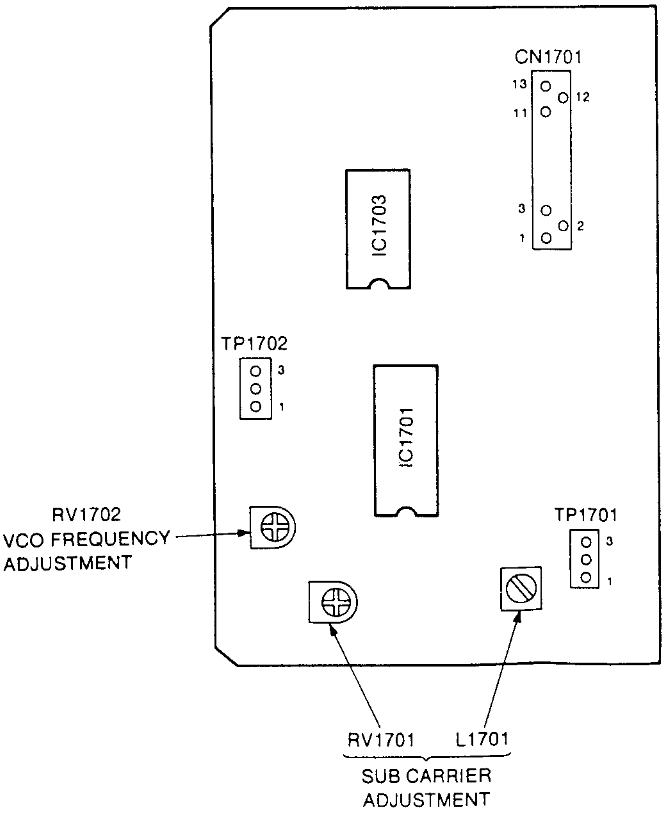

FM RF signal generator
75Ω coaxial
FM ANTENNA terminal
set

Carrier frequency : 69MHz
Output level : 1mV (60dBμ)

1. Connect the frequency counter to the TP1702 and adjust the RV1702 for a frequency of 31.25kHz ± 50Hz.
2. Connect the VTVM to the TP1701, receive the signal of 69MHz ± 1kHz (1kHz dev.) and adjust the reading of the VTVM to 0dB.
3. Set the modulation frequency of the FM RF signal generator to 31.25kHz (10kHz dev.) and adjust the L1701 so that the reading of the VTVM is 0dB.
4. Adjust the RV1701 so that the reading of the VTVM to 14dB.
5. Check that the separation between Pins 13 and 11 of the CN1701 is more than 18dB.

Adjustment Location : POLAR board

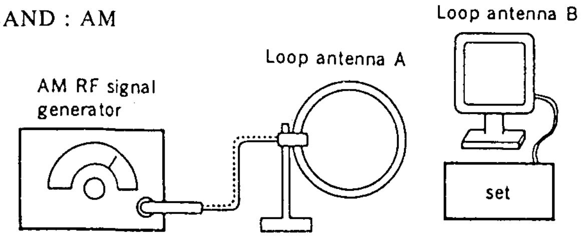
[POLAR BOARD]
(COMPONENT SIDE)


CN1701
13
12
11
3
2
1
IC1703
TP1702
3
1
IC1701
RV1702
VCO FREQUENCY ADJUSTMENT
TP1701
3
1
RV1701
L1701
SUB CARRIER ADJUSTMENT

AM SECTION

AM Tuned Indication Lighting Level

Setting :
BAND : AM


Loop antenna B
Loop antenna A
AM RF signal generator
set

Carrier frequency : 999kHz
(Except US, CND, MX model)
1050kHz
(US, CND, MX model)
Modulation : 400Hz, 30% modulation

Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes 94dBμ/m (50mV/m).
2. Tune the set to 1050kHz (US, CND, MX model) or 999kHz (Except US, CND, MX model).
3. Adjust RV51 so that the TUNED indicator goes on.

SW Control Voltage Adjustment (Frequency Coverge Adjustment)

(E, EA, MY, SP, AUS, PX, JE model)

Setting :
BAND : SW
Procedure :

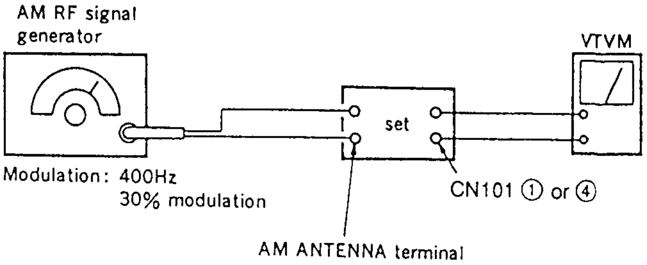
1. Connect digital voltmeter to diode D1 center lead and ground.
2. Adjust for a following value reading on digital voltmeter.

	Set frequency	Adjustment part	Reading on digital voltmeter
SW	f min. 5.95MHz	T2	1.2Vdc
	f min. 17.9MHz	CV2	8.5Vdc

SW Tracking Adjustment

(E, EA, MY, SP, AUS, PX, JE model)

Setting :
BAND : SW

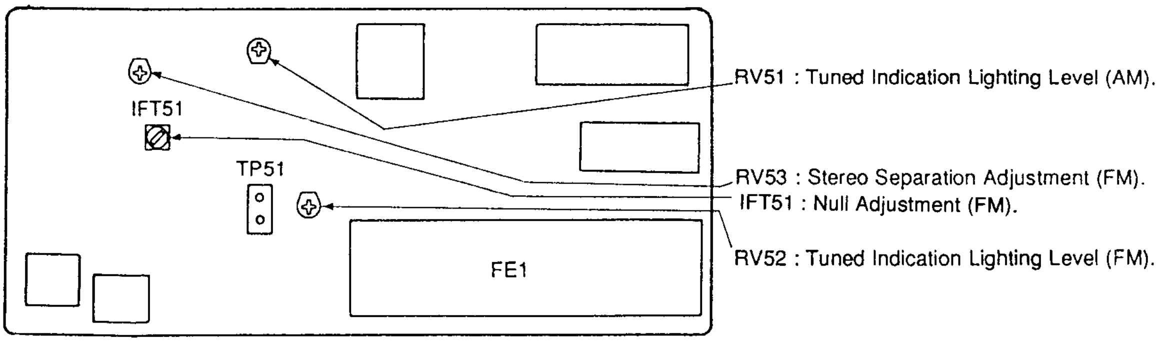

AM RF signal generator
VTVM
set
Modulation: 400Hz
30% modulation
CN101 ① or ④
AM ANTENNA terminal

Procedure :
Adjust for a maximun reading on VTVM.

	Set frequency	Adjustment part
SW	f low 7MHz	T1
	f high 17MHz	CV1

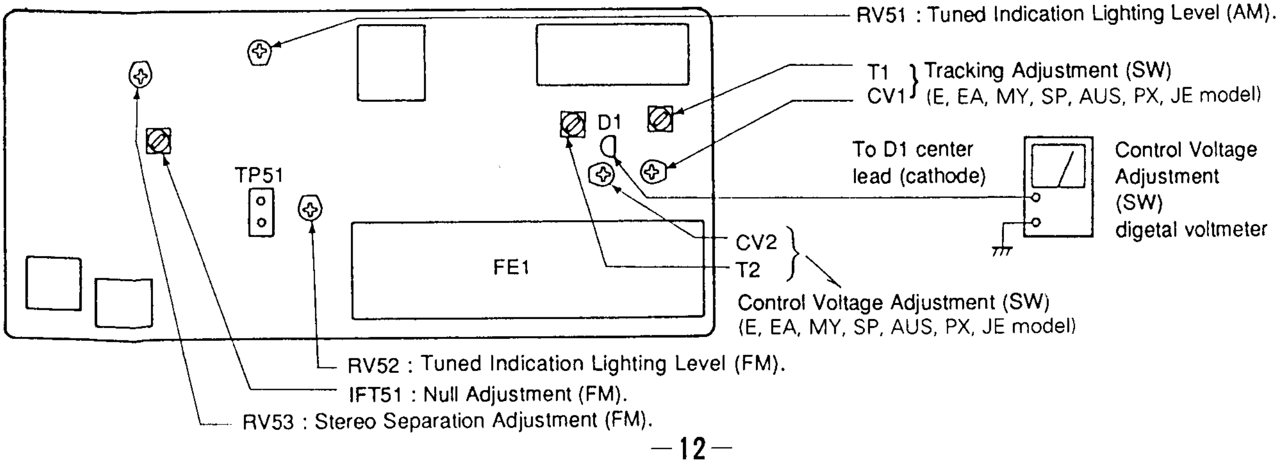
- Repeat the procedures is each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

Adjustment Location:
TCB BOARD (AEP, UK, G, IT, EE, CIS model) — Component Side —


IFT51
TP51
FE1
RV51 : Tuned Indication Lighting Level (AM).
RV53 : Stereo Separation Adjustment (FM).
IFT51 : Null Adjustment (FM).
RV52 : Tuned Indication Lighting Level (FM).

Note :
CND : Canadian
IT : Italian
G : German
EE : East European
EA : Saudi Arabia
MX : Mexican
SP : Singapore
MY : Malaysia
AUS : Australian
JE : Tourist

Adjustment Location:
TCB BOARD (US, CND, E, EA, MX, MY, SP, AUS, PX, JE model) — Component Side —

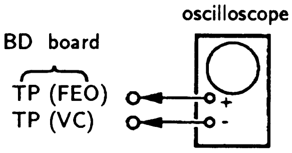

RV51 : Tuned Indication Lighting Level (AM).
T1
CV1
Tracking Adjustment (SW)
(E, EA, MY, SP, AUS, PX, JE model)
D1
TP51
To D1 center lead (cathode)
Control Voltage Adjustment (SW) digetal voltmeter
FE1
CV2
T2
Control Voltage Adjustment (SW)
(E, EA, MY, SP, AUS, PX, JE model)
RV52 : Tuned Indication Lighting Level (FM).
IFT51 : Null Adjustment (FM).
RV53 : Stereo Separation Adjustment (FM).

CD SECTION

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

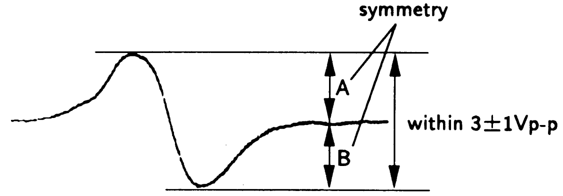
S-Curve Check


oscilloscope
BD board
TP (FEO)
TP (VC)
+
-

Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

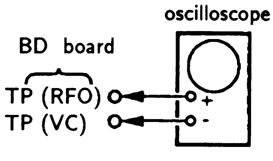
S-curve waveform


symmetry
A
B
within 3±1Vp-p

6. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check


oscilloscope
BD board
TP (RFO)
TP (VC)
+
-

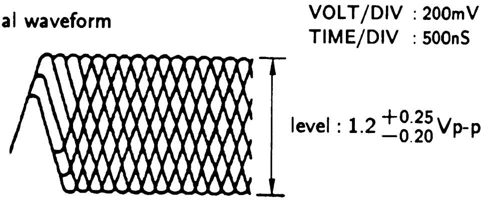
Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

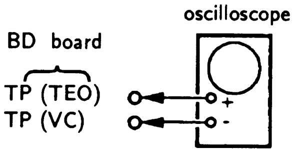
Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform


VOLT/DIV : 200mV
TIME/DIV : 500nS
level : 1.2 +0.25 −0.20 Vp-p

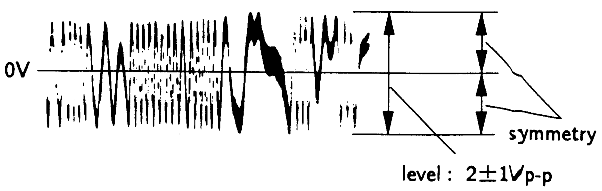
E-F Balance Check


oscilloscope
BD board
TP (TEO)
TP (VC)
+
-

Procedure :

1. Connect test point TP (ADJ) on CD board to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse waveform

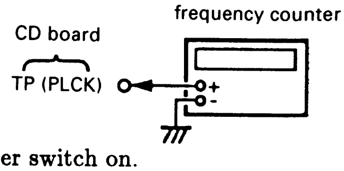

0V
symmetry
level : 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.


frequency counter
CD board
TP (PLCK)
+
-

2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

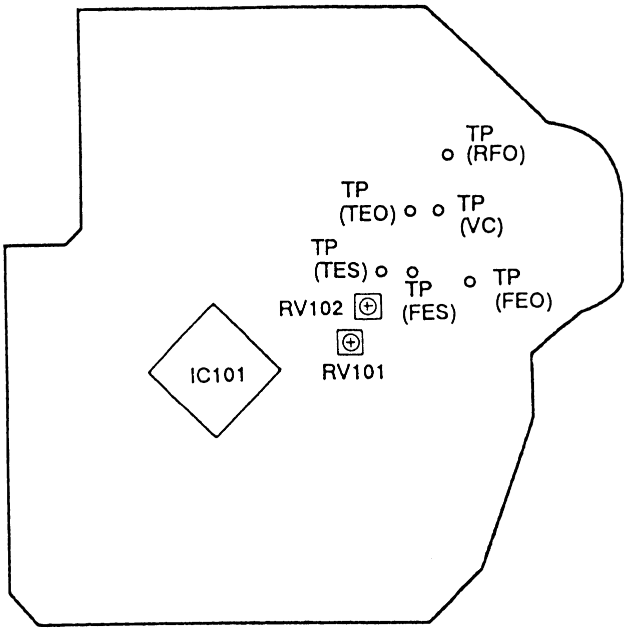
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

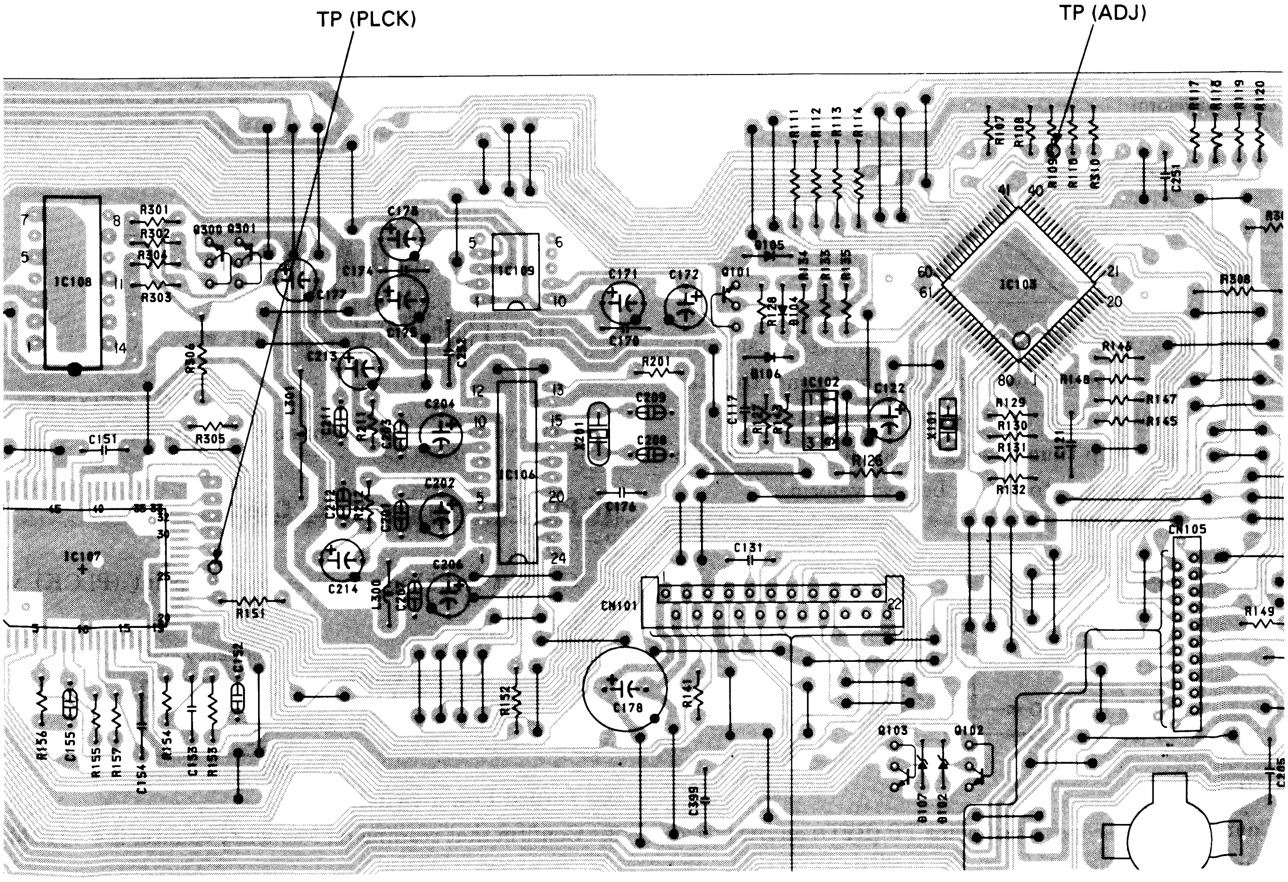
Adjustment Location :

Adjustment Location:

[BD BOARD] — CONDUCTOR SIDE —


TP (RFO)
TP (TEO)
TP (VC)
TP (TES)
TP (FES)
TP (FEO)
RV102
RV101
IC101

[CD MAIN BOARD] — CONDUCTOR SIDE —


TP (PLCK)
TP (ADJ)
IC108
IC109
IC106
IC107
IC102
IC103
CN101
CN105
X101
X201
Q101
Q102
Q103
Q300
Q301
L301
L300
C131
C151
C171
C172
C173
C174
C176
C177
C178
C202
C204
C206
C208
C209
C213
C214
C251
R117
R118
R119
R120
R107
R108
R109
R110
R310
R111
R112
R113
R114
R129
R130
R131
R132
R141
R145
R146
R147
R148
R149
R151
R152
R154
R155
R156
R157
R158
R201
R301
R302
R303
R304
R305
R308

SECTION 4
DIAGRAMS

4-1. IC PIN FUNCTION

• IC103 (CD SYSTEM CONTROL) μPD78054GC-025-3B9

Pin No.	Pin Name	I/O	Description
1	DSENSOR	AI	Disc sensor input Disc is preset when input voltage is over AV_{Ref} / 2
2	PWMSEL1	AI	This input voltage determines PWM1 duty to move the tray horizontally
3	PWMSEL2	AI	This input voltage determines PWM2 duty to move the tray horizontally
4	AVSS		G / AD GND
5		O	Fixed at “Open”
6		O	Fixed at “Open”
7	AVREF	I	+5V
8			GND
9			Fixed at “Open”
10			Fixed at “Open”
11	SUBQ	I	Q data serial input from CXD2507
12			Fixed at “Open”
13	SQCLK	O	Clock output to CXD2507 (for reading subcode Q data)
14	DFCTSW	O	DEFECT Switch
15	PRGL	O	Serial data latch pulse to digital filter LATCH
16		I	GND
17	DATA	O	Serial data output to CXD2507
18	CLK	O	Serial clock output to CXD2507
19	XLT	O	Serial data latch pulse output to CXD2507
20	LDON	O	Laser diode ON / OFF output OFF ON
21	AMUTE	O	Muting ON / OFF output NOT MUTE
22	LSIOFF	O	Servo system power supply control
23		O	Fixed at “Open”
24		O	Fixed at “Open”
25		O	Fixed at “Open”
26		O	Fixed at “Open”
27	LED0	O	LED (DISC1) data output
28	LED1	O	LED (DISC2) data output
29	LED2	O	LED (DISC3) data output
30	LED3	O	LED (DISC4) data output
31	LED4	O	LED (DISC5) data output
32	GREEN	O	LED Scan output (GREEN)
33	VSS		GND
34	ORANGE	O	LED Scan output (ORANGE)
35		O	Fixed at “Open”
36	DPDAT0	O	Display data output
37	DPDAT1	O	Display data output
38	DPDAT2	O	Display data output
39	DPDAT3	O	Display data output
40	DPCLK	O	Display clock
41	MECARI	I	Normally 5V Connection to GND enables BD operation without mechanism
42	AFADJ	I	TEST mode input “L” at power on to enable the test
43	ADJ	I	TEST mode input At “L”, GFS check is disabled
44	AGDSA	I	Normally 5V Connection to GND enables aging
45	PMOD0	I	Normally 5V Connection to GND disables reverse braking during tray horizontal control

Pin No.	Pin Name	I/O	Description
46	PMOD1	I	Normally GND Connection to 5V selects different specification for TOC reading
47		I	
48	LDIN	O	
49	LDOUT	O	
50	UP	O	
51	DOWN	O	
52	CLOSESW	I	Mechanism control sw terminal
53	OPENSW	I	Mechanism control sw terminal
54	INSW	I	Mechanism control sw terminal
55	OUTSW	I	Mechanism control sw terminal
56	COUNTSW	I	Mechanism control sw terminal
57	INITSW	I	Mechanism control sw terminal
58		I	
59	E.MRHI	I	"H": CD tray cover panel OPEN "L": CD tray cover panel CLOSE
60	$\overline{\text{RESET}}$	I	Reset
61	BSIN	I	AU BUS input
62		I	GND
63		I	GND
64		I	GND
65	BSOUT	O	AU BUS output
66	SENS	I	SENS Signal input from CXD2507, CXA1372
67	SCOR	I	Subcode Sync SO / SI detection
68	VDD		5V
69	X2		High frequency oscillator connect pin (4MHz)
70	X1	I	High frequency oscillator connect pin (4MHz)
71	IC		GND
72	XT2		Fixed at "Open"
73	XT1	I	GND
74	AVDD		5V
75	AVREF	I	5V
76	KEY0	AI	Key input terminal
77	KEY1	AI	Key input terminal
78	KEY2	AI	Key input terminal
79	KEY3	AI	Key input terminal
80	MIDSNS	AI	Sensor signal input to mechanism control

• IC201 (SYSTEM CONTROL/MECHANISM CONTROL) M38122M2-067FP

Pin No.	Pin Name	I/O	Description
1	KEY4	I	Key input terminal
2	ML	I	Fixed at “L”
3	MR	I	Fixed at “L”
4	AM5	I	Fixed at “L”
5	A HALF	I	Half pawl input for DECK-A
6	A SHUT	I	Take up side reel rotation detection at DECK-A
7	A SHUMIT	O	Take up side reel rotation detection at DECK-A
8	B SHUT	I	Take up side reel rotation detection at DECK-A
9	B SHUMIT	O	Take up side reel rotation detection at DECK-A
10	PB $\overline{A}$ / B	O	Playback A / B selector “L”: DECK-A “H”: DECK-B
11	EQ H / $\overline{L}$	O	Equalizer selector “L”: Normal “H”: High
12	RM	O	Recording mute ON / OFF “L”: Mute OFF “H”: Mute ON
13	REC / $\overline{PB}$	O	Recording / Playback selector “L”: PB “H”: REC
14	$\overline{LM}$	O	Line / Meter Mute terminal “L”: Mute ON “H”: Mute OFF
15	B BIAS	O	Bias ON / OFF at DECK-B “L”: Bias OFF “H”: Bias ON
16	AU-B IN	I	AU BUS input
17	PIN 2	I	Power ON / OFF (2)
18	PIN 1	I	Power ON / OFF (1)
19	RST	I	Reset terminal
20	NC	O	Fixed at “Open”
21	AU-B OUT	O	AU BUS output
22	X IN	I	System clock input terminal (4MHz)
23	X OUT	O	System clock output terminal (4MHz)
24	VSS	–	GND
25	B RELAY	O	Recording / Playback selector at DECK-B “H”: REC
26	$\overline{T\ MODE}$	I	Test mode terminal “L”: Test mode
27	B PLY SW	I	Playback switch at DECK-B “H”: PB
28	A PLY SW	I	Playback switch at DECK-A “H”: PB
29	NC	O	Fixed at “Open”
30	NC	O	Fixed at “Open”
31	NC	O	Fixed at “Open”
32	NC	O	Fixed at “Open”
33	NC	O	Fixed at “Open”
34	NC	O	Fixed at “Open”
35	NC	O	Fixed at “Open”
36	NC	O	Fixed at “Open”
37	NC	O	Fixed at “Open”
38	NC	O	Fixed at “Open”
39	NC	O	Fixed at “Open”
40	EZ	O	Not used
41	A PLAY	O	Not used
42	AFWD	O	LED driver
43	A REV	O	LED driver
44	B PLAY	O	Not used
45	B FWD	O	LED driver

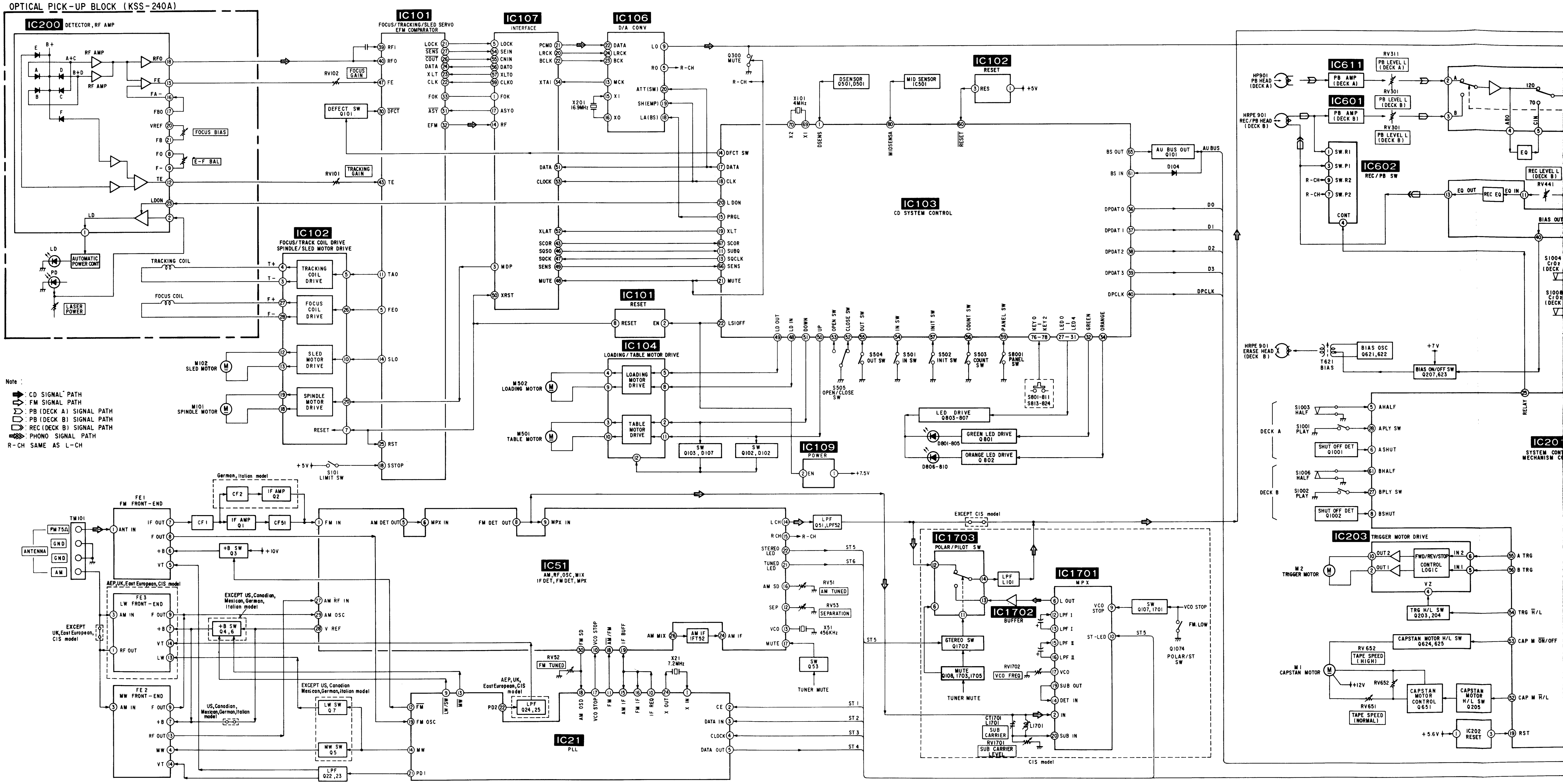
Pin No.	Pin Name	I/O	Description
46	B REV	O	LED driver
47	PAUSE	O	LED driver
48	REC	O	LED driver
49	DUBH	O	LED driver
50	NC	–	Not used
51	CD SYNC	O	LED driver
52	CAP M $\overline{\text{H}}$ / L	O	Capstan motor speed selector (0V=High, 5V=Normal)
53	CAP M $\overline{\text{ON}}$ / OF	O	Capstan motor ON / OFF "L": ON "H": OFF
54	TRG $\overline{\text{H}}$ / L	O	Trigger motor control "H": Low "L": High
55	A TRG	O	Trigger motor control
56	B TRG	O	Trigger motor control
57	VCC	–	Power supply (+5V)
58	VEE	–	Pulldown power supply input
59	A VSS	–	Power supply (GND)
60	V REF	–	A / D Reference voltage (+5V)
61	B HALF	I	Half pawl input for DECK-B (REC pawl A / B side)
62	KEY 1	I	Key input terminal
63	KEY 2	I	Key input terminal
64	KEY 3	I	Key input terminal

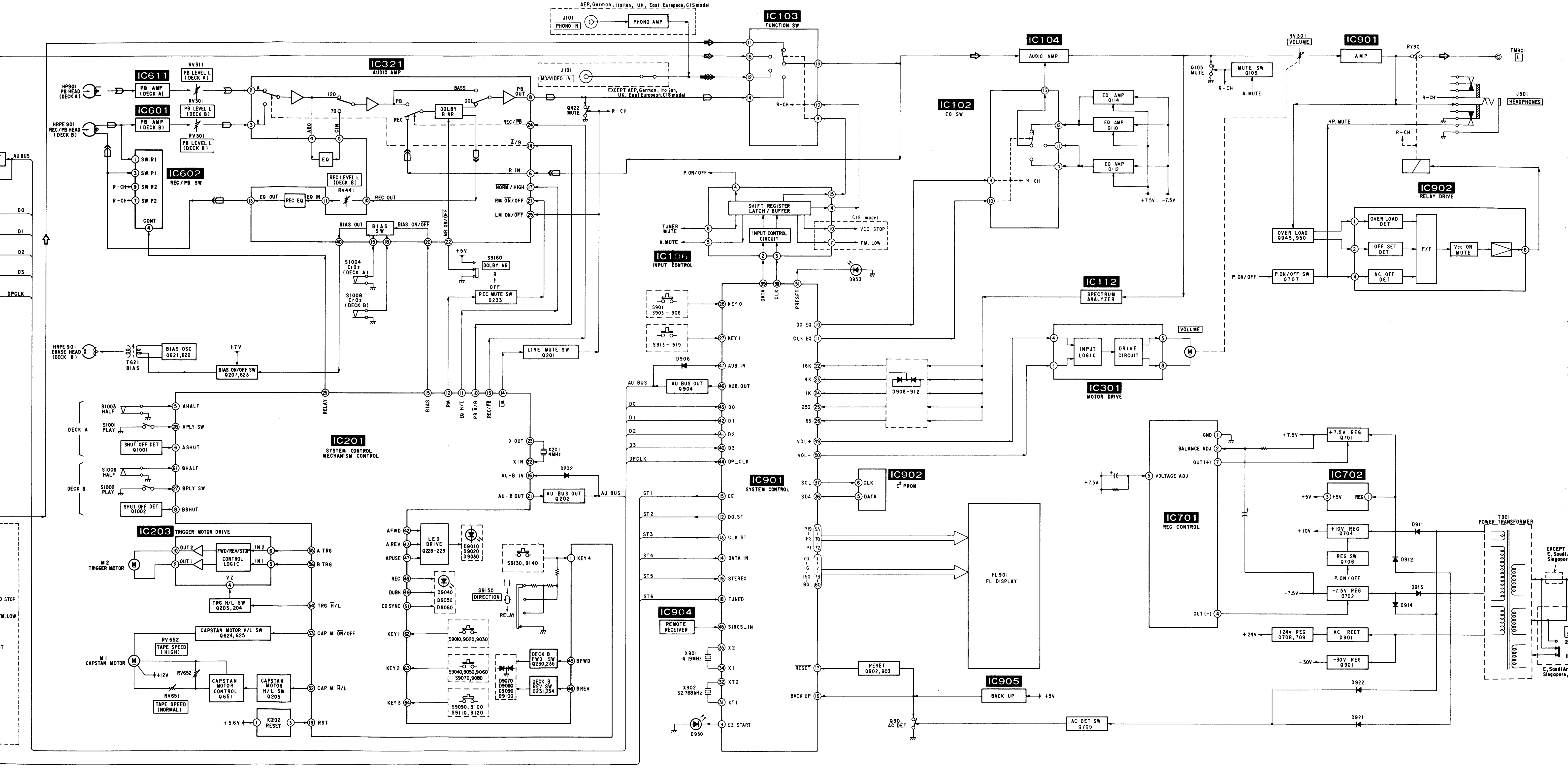
• IC901 (SYSTEM CONTROL) μPD78042GF-075-3B9

Pin No.	Pin Name	I/O	Description
1	7G	O	FL tube digit output
2	6G	O	FL tube digit output
3	5G	O	FL tube digit output
4	4G	O	FL tube digit output
5	3G	O	FL tube digit output
6	2G	O	FL tube digit output
7	1G	O	FL tube digit output
8	+5V	–	Microcomputer power (5V)
9	–	–	Not used
10	EQ DATA A	O	EQ DATA output A
11	EQ DATA B	O	EQ DATA output B
12	DO ST	O	Serial data output to LC7218 (PLL IC)
13	CLK ST	O	Serial clock output to LC7218 (PLL IC)
14	DATA IN	I	Serial data input from LC7218 (PLL IC)
15	CE	O	Chip select to LC7218 (PLL IC)
16	BACK UP	I	Backup signal DET
17	RESET	I	Reset
18	TUNED	I	Tuning signal from tuner block (L···TUNING)
19	STEREO	I	Stereo signal from tuner block (L···FM STEREO received)
20	GND	–	GND
21	DEST	I	Country select
22	16K	I	Spectrum analyzer signal input (16kHz)
23	4K	I	Spectrum analyzer signal input (4kHz)
24	1K	I	Spectrum analyzer signal input (1kHz)
25	250	I	Spectrum analyzer signal input (250Hz)
26	63	I	Spectrum analyzer signal input (63Hz)
27	Key 1	I	Key input terminal
28	Key 0	I	Key input terminal
29	AVDD	–	A / D power for key input (5V)
30	AV REF	–	A / D reference voltage (5V)
31	XT 1	I	Crystal connection pin for subclock oscillator (32.768kHz)
32	XT 2	O	Crystal connection pin for subclock oscillator (32.768kHz)
33	VSS	–	GND
34	X 1	I	Crystal connection pin for Main clock oscillator (4.19MHz)
35	X 2	O	Crystal connection pin for Main clock oscillator (4.19MHz)
36	SDA	O	ROM data
37	SCL	O	ROM clock
38	CLK	O	Serial clock output to M50253 (Serial in / Parallel out)
39	DATA	O	Serial data output to M50253 (Serial in / Parallel out)
40	D 3	I	Display data 3 from μPD78052 or μPD78055 (CD controller)
41	D 2	I	Display data 2 from μPD78052 or μPD78055 (CD controller)
42	D 1	I	Display data 1 from μPD78052 or μPD78055 (CD controller)
43	D 0	I	Display data 0 from μPD78052 or μPD78055 (CD controller)
44	DP-CLK	I	Serial clock from μPD78052 or μPD78055 (CD controller)
45	SIRCS-IN	I	SIRCS input

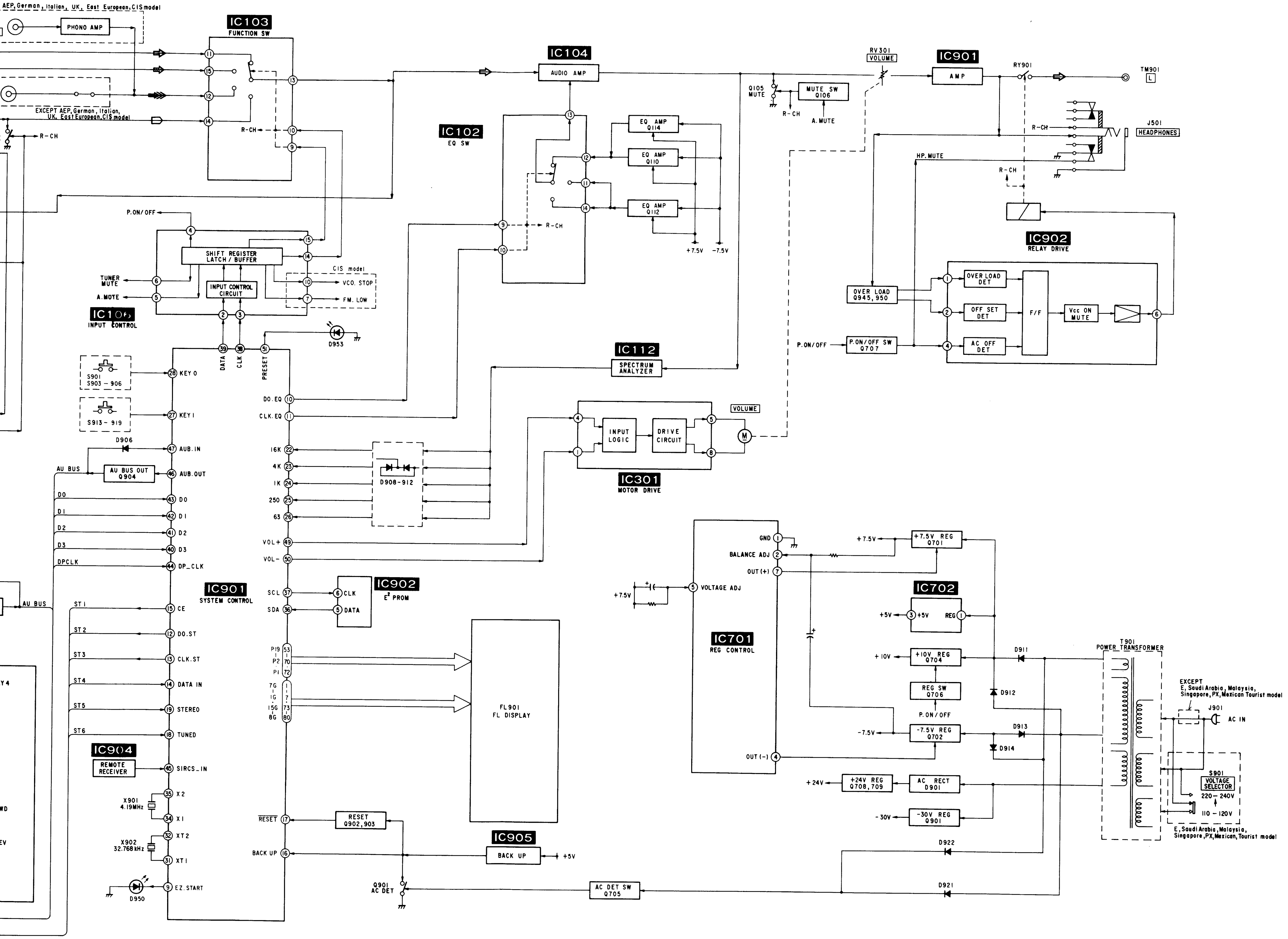
Pin No.	Pin Name	I/O	Description
46	AUB-OUT	O	AU BUS output
47	AUB-IN	I	AU BUS input
48	IC	–	GND
49	VOL+	O	Volume control up
50	VOL–	O	Volume control down
51	PRESET	O	LED driver
52	VDD	–	Microcomputer power (5V)
53	P19	O	FL tube segment output
54	P18	O	FL tube segment output
55	P17	O	FL tube segment output
56	P16	O	FL tube segment output
57	P15	O	FL tube segment output
58	P14	O	FL tube segment output
59	P13	O	FL tube segment output
60	P12	O	FL tube segment output
61	P11	O	FL tube segment output
62	P10	O	FL tube segment output
63	P9	O	FL tube segment output
64	P8	O	FL tube segment output
65	P7	O	FL tube segment output
66	P6	O	FL tube segment output
67	P5	O	FL tube segment output
68	P4	O	FL tube segment output
69	P3	O	FL tube segment output
70	P2	O	FL tube segment output
71	-30V	–	Minus voltage for FL tube
72	P1	O	FL tube segment output
73	15G	O	FL tube digit output
74	14G	O	FL tube digit output
75	13G	O	FL tube digit output
76	12G	O	FL tube digit output
77	11G	O	FL tube digit output
78	10G	O	FL tube digit output
79	9G	O	FL tube digit output
80	8G	O	FL tube digit output

4-2. BLOCK DIAGRAM

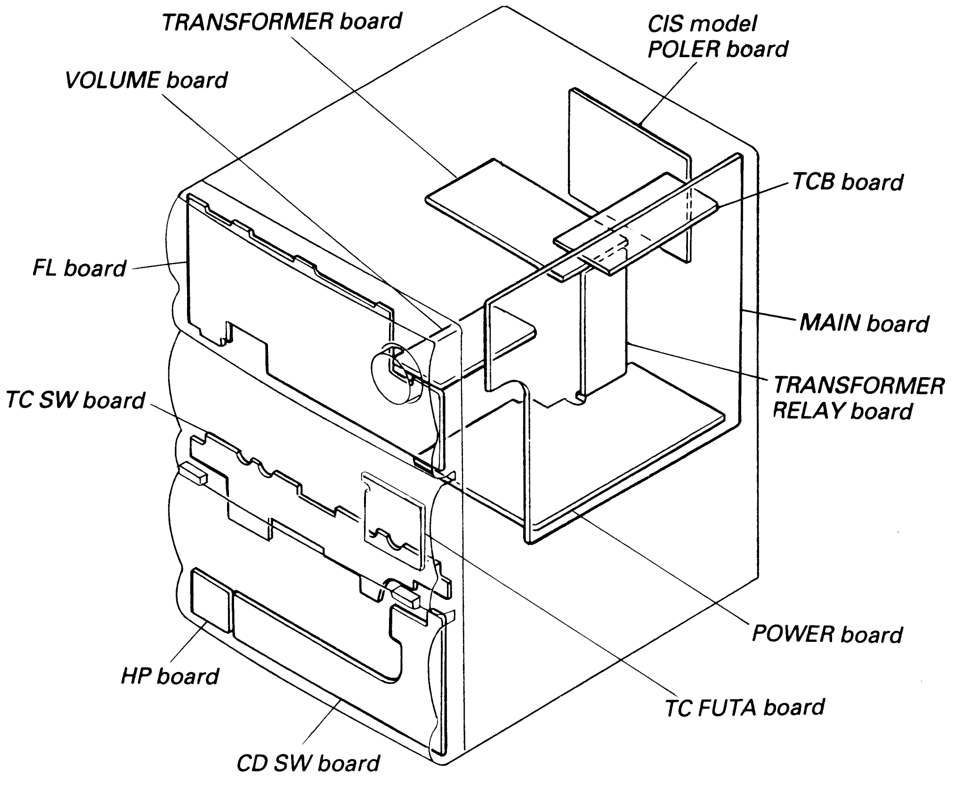

OPTICAL PICK-UP BLOCK (KSS-240A)
IC200 DETECTOR, RF AMP
IC101 FOCUS/TRACKING/SLED SERVO EFM COMPARATOR
IC107 INTERFACE
IC106 D/A CONV
IC102 RESET
IC102 FOCUS/TRACK COIL DRIVE SPINDLE/SLED MOTOR DRIVE
IC101 RESET
IC104 LOADING/TABLE MOTOR DRIVE
IC103 CD SYSTEM CONTROL
IC109 POWER
IC51 AM,RF,OSC,MIX IF DET, FM DET, MPX
IC21 PLL
IC1703 POLAR/PILOT SW
IC1702 BUFFER
IC1701 MPX
IC611 PB AMP (DECK A)
IC601 PB AMP (DECK B)
IC602 REC/PB SW
IC203 TRIGGER MOTOR DRIVE
IC202 RESET
IC20 SYSTEM CONT MECHANISM C
M102 SLED MOTOR
M101 SPINDLE MOTOR
M502 LOADING MOTOR
M501 TABLE MOTOR
M2 TRIGGER MOTOR
M1 CAPSTAN MOTOR
FE1 FM FRONT-END
FE3 LW FRONT-END
FE2 MW FRONT-END
TM101
ANTENNA
German, Italian model
AEP,UK,East European,CIS model
EXCEPT UK,East European, CIS model
EXCEPT CIS model
CIS model
Note :
: CD SIGNAL PATH
: FM SIGNAL PATH
: PB (DECK A) SIGNAL PATH
: PB (DECK B) SIGNAL PATH
: REC (DECK B) SIGNAL PATH
: PHONO SIGNAL PATH
R-CH SAME AS L-CH

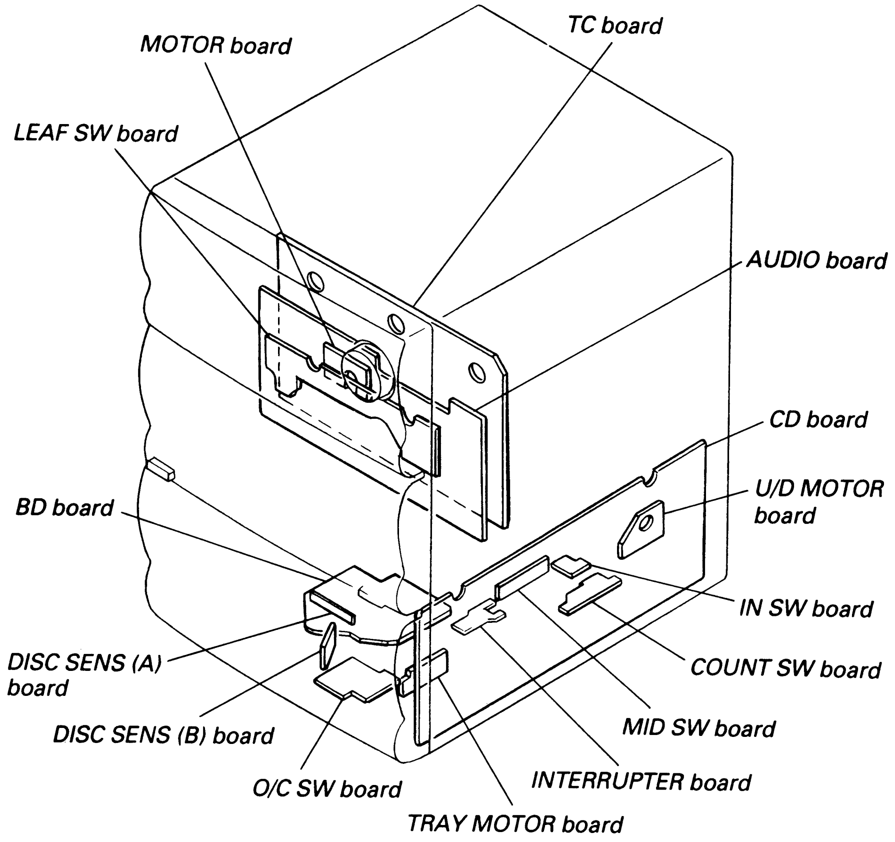


AEP, German, Italian, UK, East European, CIS model
J101 PHONO IN
PHONO AMP
IC103 FUNCTION SW
J101 MD/VIDEO IN
EXCEPT AEP, German, Italian, UK, East European, CIS model
IC321 AUDIO AMP
IC611 PB AMP (DECK A)
IC601 PB AMP (DECK B)
HP901 PB HEAD (DECK A)
HRPE901 REC/PB HEAD (DECK B)
RV311 PB LEVEL L (DECK A)
RV301 PB LEVEL L (DECK B)
BASS
DOLBY B NR
PB OUT
REC/PB
A/B
R IN
NORM/HIGH
RM.ON/OFF
LM.ON/OFF
Q422 MUTE
R-CH
IC602 REC/PB SW
SW.R1
SW.P1
SW.R2
SW.P2
CONT
EQ
EQ OUT
REC EQ
EQ IN
REC LEVEL L (DECK B)
RV441
REC OUT
BIAS OUT
BIAS SW
BIAS ON/OFF
NR ON/OFF
S1004 CrO2 (DECK A)
S1008 CrO2 (DECK B)
S9160 DOLBY NR
REC MUTE SW Q233
HRPE901 ERASE HEAD (DECK B)
T621 BIAS
BIAS OSC Q621,622
BIAS ON/OFF SW Q207,623
LINE MUTE SW Q201
AU BUS
D0
D1
D2
D3
DPCLK
RELAY
BIAS
RM
EQ H/L
PB A/B
REC/PB
LM
S1003 HALF
S1001 PLAY
DECK A
SHUT OFF DET Q1001
AHALF
APLY SW
ASHUT
S1006 HALF
S1002 PLAY
DECK B
SHUT OFF DET Q1002
BHALF
BPLY SW
BSHUT
IC201 SYSTEM CONTROL MECHANISM CONTROL
X OUT
X IN
X201 4MHz
AU-B IN
AU-B OUT
D202
AU BUS OUT Q202
IC203 TRIGGER MOTOR DRIVE
M2 TRIGGER MOTOR
FWD/REV/STOP CONTROL LOGIC
OUT2
OUT1
IN2
IN1
VZ
A TRG
B TRG
TRG H/L SW Q203,204
TRG H/L
CAPSTAN MOTOR H/L SW Q624,625
CAP M ON/OFF
RV652 TAPE SPEED (HIGH)
M1 CAPSTAN MOTOR
+12V
CAPSTAN MOTOR CONTROL Q651
CAPSTAN MOTOR H/L SW Q205
CAP M H/L
RV651 TAPE SPEED (NORMAL)
+5.6V
IC202 RESET
RST
AFWD
A REV
APUSE
LED DRIVE Q228-229
D9010 D9020 D9030
REC
DUBH
CD SYNC
D9040 D9050 D9060
S9150 DIRECTION
S9130, 9140
KEY4
RELAY
KEY1
KEY2
KEY3
S9010,9020,9030
S9040,9050,9060 S9070,9080
S9090,9100 S9110,9120
D9070 D9080 D9090 D9100
DECK B FWD SW Q230,235
DECK B REV SW Q231,234
BFWD
BREV
P.ON/OFF
SHIFT REGISTER LATCH/BUFFER
INPUT CONTROL CIRCUIT
TUNER MUTE
A.MUTE
CIS model
VCO. STOP
FM. LOW
IC106 INPUT CONTROL
DATA
CLK
PRESET
D953
S901 S903-906
KEY0
S913-919
KEY1
D906
AUB.IN
AU BUS OUT Q904
AUB.OUT
DP_CLK
ST1
ST2
ST3
ST4
ST5
ST6
IC901 SYSTEM CONTROL
CE
DO.ST
CLK.ST
DATA IN
STEREO
TUNED
IC904 REMOTE RECEIVER
SIRCS_IN
X901 4.19MHz
X2
X1
X902 32.768kHz
XT2
XT1
D950
EZ.START
DO.EQ
CLK.EQ
16K
4K
1K
250
63
D908-912
VOL+
VOL-
SCL
SDA
IC902 E2PROM
CLK
DATA
P19
P2
P1
7G
1G
15G
8G
FL901 FL DISPLAY
RESET
RESET Q902,903
BACK UP
IC905 BACK UP
+5V
Q901 AC DET
AC DET SW Q705
IC104 AUDIO AMP
IC102 EQ SW
EQ AMP Q114
EQ AMP Q110
EQ AMP Q112
+7.5V
-7.5V
IC112 SPECTRUM ANALYZER
INPUT LOGIC
DRIVE CIRCUIT
VOLUME
IC301 MOTOR DRIVE
Q105 MUTE
MUTE SW Q106
A.MUTE
RV301 VOLUME
IC901 AMP
RY901
TM901 L
J501 HEADPHONES
HP.MUTE
IC902 RELAY DRIVE
OVER LOAD Q945,950
OVER LOAD DET
OFF SET DET
AC OFF DET
F/F
Vcc ON MUTE
P.ON/OFF SW Q707
IC701 REG CONTROL
GND
BALANCE ADJ
OUT(+)
VOLTAGE ADJ
OUT(-)
+7.5V REG Q701
IC702
+5V
REG
+10V
+10V REG Q704
REG SW Q706
-7.5V REG Q702
D911
D912
D913
D914
+24V
+24V REG Q708,709
AC RECT D901
-30V
-30V REG Q901
D922
D921
T901 POWER TRANSFORMER
EXCEPT E.Saudi Singapore
E.Saudi Ar Singapore
STOP
FM.LOW


AEP, German, Italian, UK, East European, CIS model
PHONO AMP
EXCEPT AEP, German, Italian, UK, East European, CIS model
R-CH
IC103
FUNCTION SW
IC104
AUDIO AMP
IC102
EQ SW
EQ AMP Q114
EQ AMP Q110
EQ AMP Q112
+7.5V
-7.5V
RV301 VOLUME
Q105 MUTE
MUTE SW Q106
A.MUTE
IC901
AMP
RY901
TM901 L
J501 HEADPHONES
HP.MUTE
IC902
RELAY DRIVE
OVER LOAD Q945, 950
OVER LOAD DET
OFF SET DET
AC OFF DET
F/F
Vcc ON MUTE
P.ON/OFF
P.ON/OFF SW Q707
P.ON/OFF
SHIFT REGISTER LATCH / BUFFER
INPUT CONTROL CIRCUIT
TUNER MUTE
A.MUTE
CIS model
VCO. STOP
FM. LOW
IC106
INPUT CONTROL
D953
DATA
CLK
PRESET
IC112
SPECTRUM ANALYZER
S901 S903 - 906
KEY 0
S913 - 919
KEY 1
D906
AUB. IN
AU BUS
AU BUS OUT Q904
AUB. OUT
D0
D1
D2
D3
DPCLK
DP_CLK
DQ. EQ
CLK. EQ
16K
4K
1K
250
63
D908 - 912
INPUT LOGIC
DRIVE CIRCUIT
IC301
MOTOR DRIVE
VOLUME
VOL+
VOL-
IC901
SYSTEM CONTROL
AU BUS
ST1
CE
ST2
DO. ST
ST3
CLK. ST
ST4
DATA IN
ST5
STEREO
ST6
TUNED
IC904
REMOTE RECEIVER
SIRCS_IN
X901 4.19MHz
X2
X1
X902 32.768kHz
XT2
XT1
D950
EZ. START
SCL
SDA
CLK
DATA
IC902
E² PROM
P19
P2
P1
7G
1G
15G
8G
FL901
FL DISPLAY
RESET
RESET Q902, 903
BACK UP
IC905
BACK UP
+5V
Q901 AC DET
AC DET SW Q705
IC701
REG CONTROL
GND
BALANCE ADJ
OUT (+)
VOLTAGE ADJ
OUT (-)
+7.5V
+7.5V REG Q701
IC702
+5V
REG
+10V
+10V REG Q704
REG SW Q706
P.ON/OFF
-7.5V
-7.5V REG Q702
+24V
+24V REG Q708, 709
AC RECT D901
-30V
-30V REG Q901
D911
D912
D913
D914
D921
D922
T901
POWER TRANSFORMER
EXCEPT E, Saudi Arabia, Malaysia, Singapore, PX, Mexican Tourist model
J901
AC IN
S901 VOLTAGE SELECTOR
220 - 240V
110 - 120V
E, Saudi Arabia, Malaysia, Singapore, PX, Mexican, Tourist model

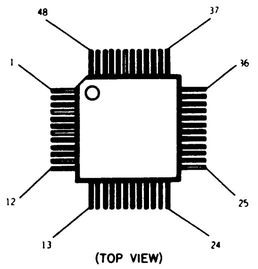
4-3. CIRCUIT BOARDS LOCATION


TRANSFORMER board
CIS model POLER board
VOLUME board
TCB board
FL board
MAIN board
TC SW board
TRANSFORMER RELAY board
POWER board
HP board
TC FUTA board
CD SW board

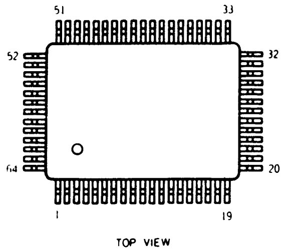

TC board
MOTOR board
LEAF SW board
AUDIO board
CD board
BD board
U/D MOTOR board
IN SW board
COUNT SW board
DISC SENS (A) board
DISC SENS (B) board
MID SW board
INTERRUPTER board
O/C SW board
TRAY MOTOR board

4-4. SEMICONDUCTOR LEAD LAYOUTS

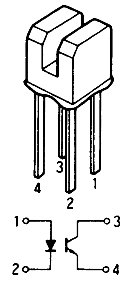
CXA1372AQ


48
37
1
36
12
25
13
24
(TOP VIEW)

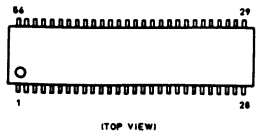
CXD2507Q
TC74HC04AP
VXD2507Q


51
33
52
32
64
20
1
19
TOP VIEW

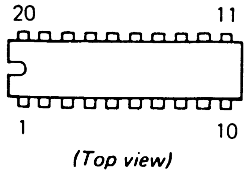
GP1S24



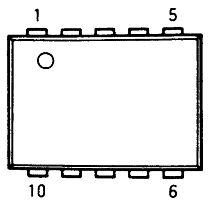
HA12172NT


56
29
1
28
(TOP VIEW)

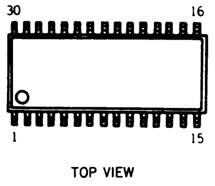
IR3R42
M5289P


20
11
1
10
(Top view)

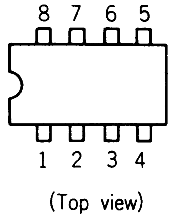
LA5601



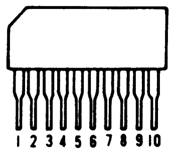
LA1851NM
LA6532


30
16
1
15
TOP VIEW

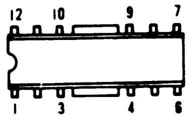
LB1639
M5218AP
UPC4570C-1


8 7 6 5
1 2 3 4
(Top view)

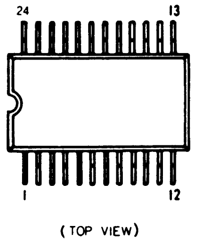
LB1641


1 2 3 4 5 6 7 8 9 10

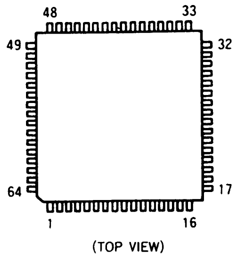
LB1648


12
10
9
7
1
3
4
6

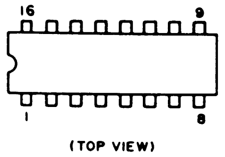
LC7218M


24
13
1
12
(TOP VIEW)

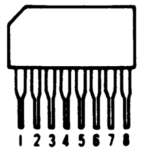
M38122M2-067FP


48
33
49
32
64
17
1
16
(TOP VIEW)

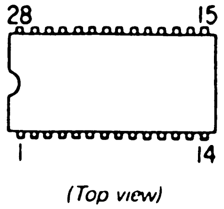
M50253P
MC14052BCP
µPD4053BC


16
9
1
8
(TOP VIEW)

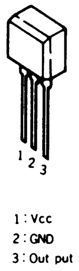
M5218AL
M5230L-A
UPC1237HA



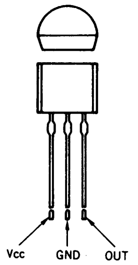
NJU7305L


28
15
1
14
(Top view)

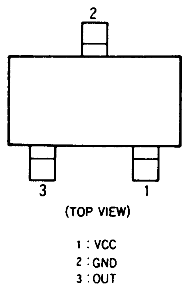
PST572E


1
2
3
1 : Vcc
2 : GND
3 : Out put

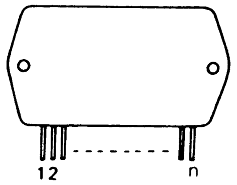
PST600D-T



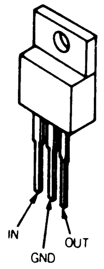
PST-600EMT-T1


2
3
1
(TOP VIEW)
1 : VCC
2 : GND
3 : OUT

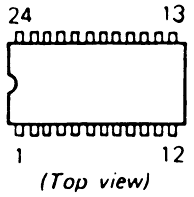
STK4152II



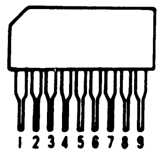
TA7805L
TA7805S



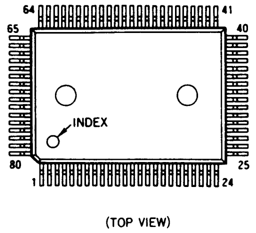
TC9293N


24
13
1
12
(Top view)

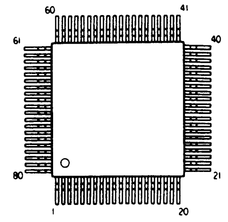
UPC1330HA



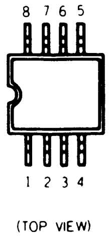
UPD78042GF-075-3B9


64
41
65
40
INDEX
80
25
1
24
(TOP VIEW)

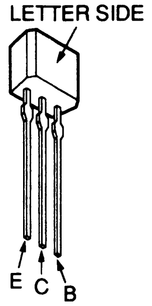
UPD78054GC-023-3B9
UPD78055GC-021-3B9


60
41
61
40
80
21
1
20

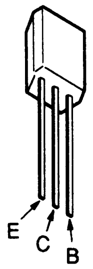
X24C01S-TP


8 7 6 5
1 2 3 4
(TOP VIEW)

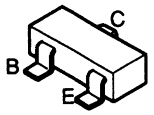
2SA1175-HFE
2SC3623A-LK


LETTER SIDE
E
C
B

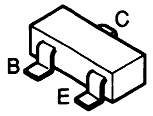
2SA1344
2SC2603-EF
2SC3622A-LK
DTA114ES
DTA114YS
DTA124ES
DTC114ES
DTC124ES
DTC144ES



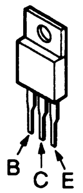
2SA1602F
2SC2814-F4
2SC3398
2SC4154F
2SC4666BB-TP1
DTC144EK



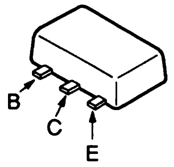
2SA1678
2SC4398



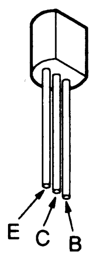
2SB1094-LK
2SD2012



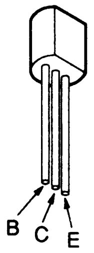
2SB798-DLDK



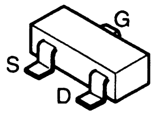
2SC1841-PAFAEA
2SD1387-3
2SD1387-3



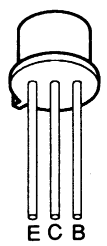
2SC2001-LK



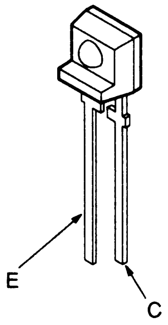
2SK208-GRT5LSONY-1



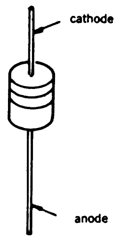
2SK246-Y



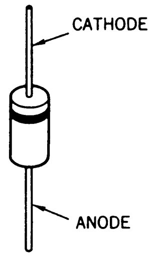
TPS626-B



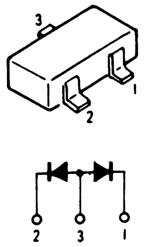
11ES2
HZS30-2L
RD5.6ESB
RD6.8ESB3
UZ-4.7BSA
UZL-11H1
UZL-12M1
UZL-24L
UZL-6M2


cathode
anode

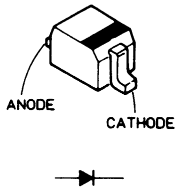
1N4148M
UZ-4.3BSC
UZ5.6BSA
UZP-5.6B


CATHODE
ANODE

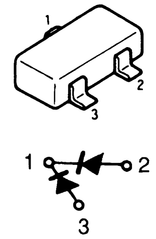
1S2836



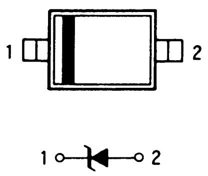
1SS352


ANODE
CATHODE

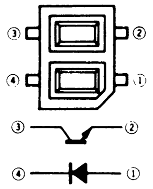
DCB010



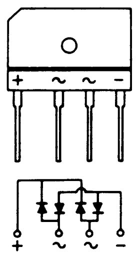
MA113-TX
MA8056



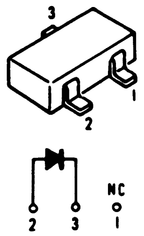
NJL5165K-A



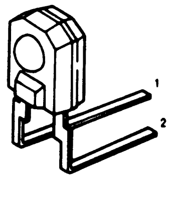
RBA-402



RD6.2M-B2

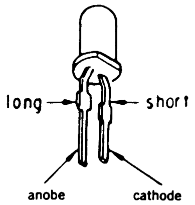


TLN117-B

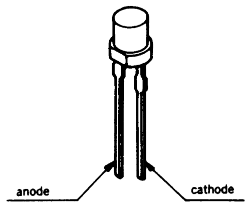


1. Emitter
2. Collector

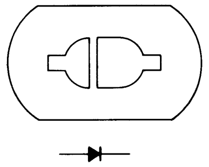
SEL2410E-C-TP6
SEL2910A-TP6
SEL3210S-CD


long
short
anobe
cathode

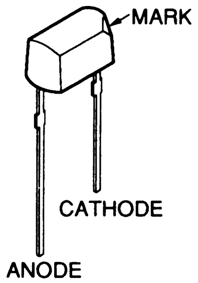
SEL3213C-D


anode
cathode

SEL5220E
SEL5220S-TP15
SEL5420E-TP15
SEL5920A-TP15



SEL5220S-TH8C


MARK
CATHODE
ANODE

• Semiconductor Location

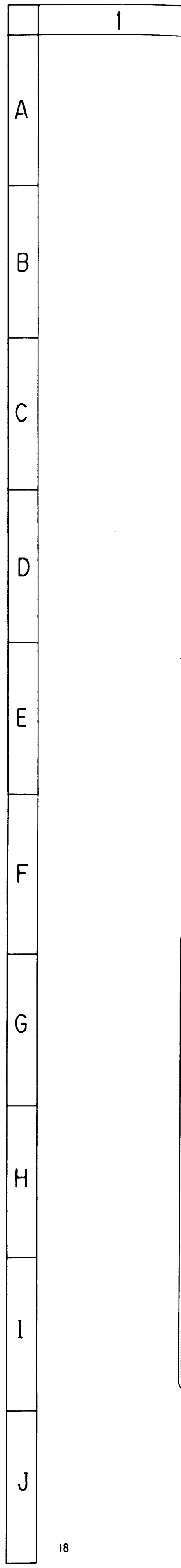
Ref. No.	Location	Ref. No.	Location
D101	C-4	IC106	B-5
D102	B-4	IC112	C-6
D301	I-2	IC301	H-2
D703	G-5	IC701	G-5
D706	G-5	IC702	F-5
D707	F-4	IC901	H-16
D708	E-10	IC902	F-14
D901	I-14		
D902	F-15	Q105	C-6
D903	H-14	Q106	C-6
D904	H-14	Q110	D-7
D905	H-14	Q111	D-6
D906	I-14	Q112	D-6
D907	I-15	Q113	D-6
D911	E-15	Q114	D-5
D912	E-15	Q115	D-5
D913	E-15	Q701	F-6
D914	E-15	Q702	F-7
D921	E-15	Q704	F-4
D922	E-15	Q705	G-7
D945	F-14	Q706	G-7
D946	D-13	Q707	G-5
		Q709	F-10
IC101	E-9	Q901	H-14
IC102	E-5	Q945	H-15
IC103	G-9	Q950	F-14
IC104	E-7	Q959	F-15

Note:

- ○—— : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.

- Abbreviations
  - AUS : Australian
  - CND : Canadian
  - EA : Saudi Arabia
  - EE : East European
  - G : German
  - IT : Italian
  - JE : Tourist
  - MY : Malaysia
  - MX : Mexican
  - SP : Singapore

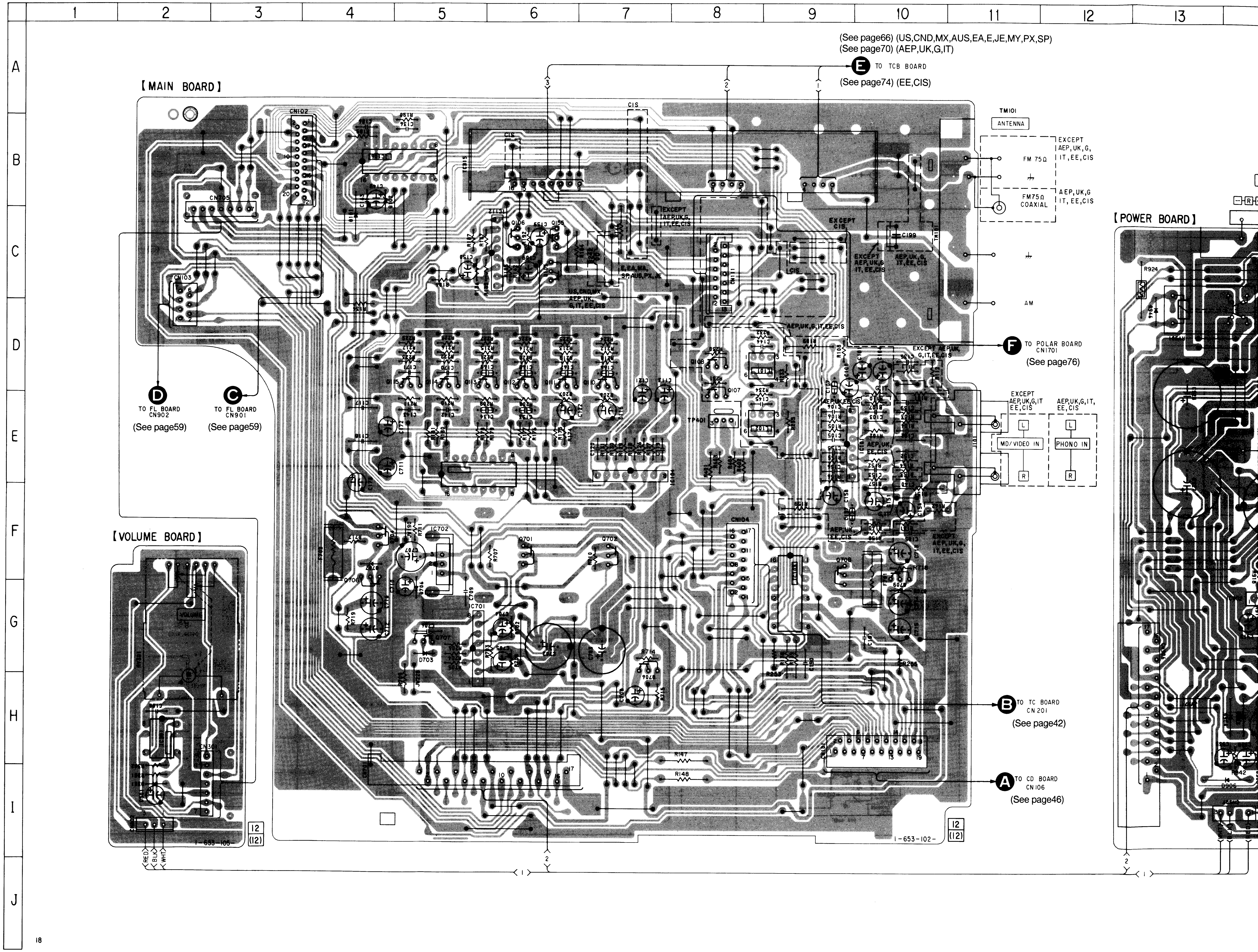
4-5. PRINTED W


1
A
B
C
D
E
F
G
H
I
J
18

4-5. PRINTED WIRING BOARDS—MAIN Section— • See page 25 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C - 4	IC106	B - 5
D102	B - 4	IC112	C - 6
D301	I - 2	IC301	H - 2
D703	G - 5	IC701	G - 5
D706	G - 5	IC702	F - 5
D707	F - 4	IC901	H - 16
D708	E - 10	IC902	F - 14
D901	I - 14		
D902	F - 15	Q105	C - 6
D903	H - 14	Q106	C - 6
D904	H - 14	Q110	D - 7
D905	H - 14	Q111	D - 6
D906	I - 14	Q112	D - 6
D907	I - 15	Q113	D - 6
D911	E - 15	Q114	D - 5
D912	E - 15	Q115	D - 5
D913	E - 15	Q701	F - 6
D914	E - 15	Q702	F - 7
D921	E - 15	Q704	F - 4
D922	E - 15	Q705	G - 7
D945	F - 14	Q706	G - 7
D946	D - 13	Q707	G - 5
		Q709	F - 10
IC101	E - 9	Q901	H - 14
IC102	E - 5	Q945	H - 15
IC103	G - 9	Q950	F - 14
IC104	E - 7	Q959	F - 15


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
(See page66) (US,CND,MX,AUS,EA,E,JE,MY,PX,SP)
(See page70) (AEP,UK,G,IT)
E TO TCB BOARD
(See page74) (EE,CIS)
[MAIN BOARD]
TM101
ANTENNA
EXCEPT AEP,UK,G, IT,EE,CIS
FM 75Ω
FM75Ω COAXIAL
AEP,UK,G IT,EE,CIS
AM
[POWER BOARD]
F TO POLAR BOARD CN1701
(See page76)
EXCEPT AEP,UK,G,IT EE,CIS
AEP,UK,G,IT, EE,CIS
MD/VIDEO IN
PHONO IN
L
R
D TO FL BOARD CN902
(See page59)
C TO FL BOARD CN901
(See page59)
[VOLUME BOARD]
B TO TC BOARD CN201
(See page42)
A TO CD BOARD CN106
(See page46)
1-653-102-
12 (12)
1-653-105
RED
BLK
WHT
18

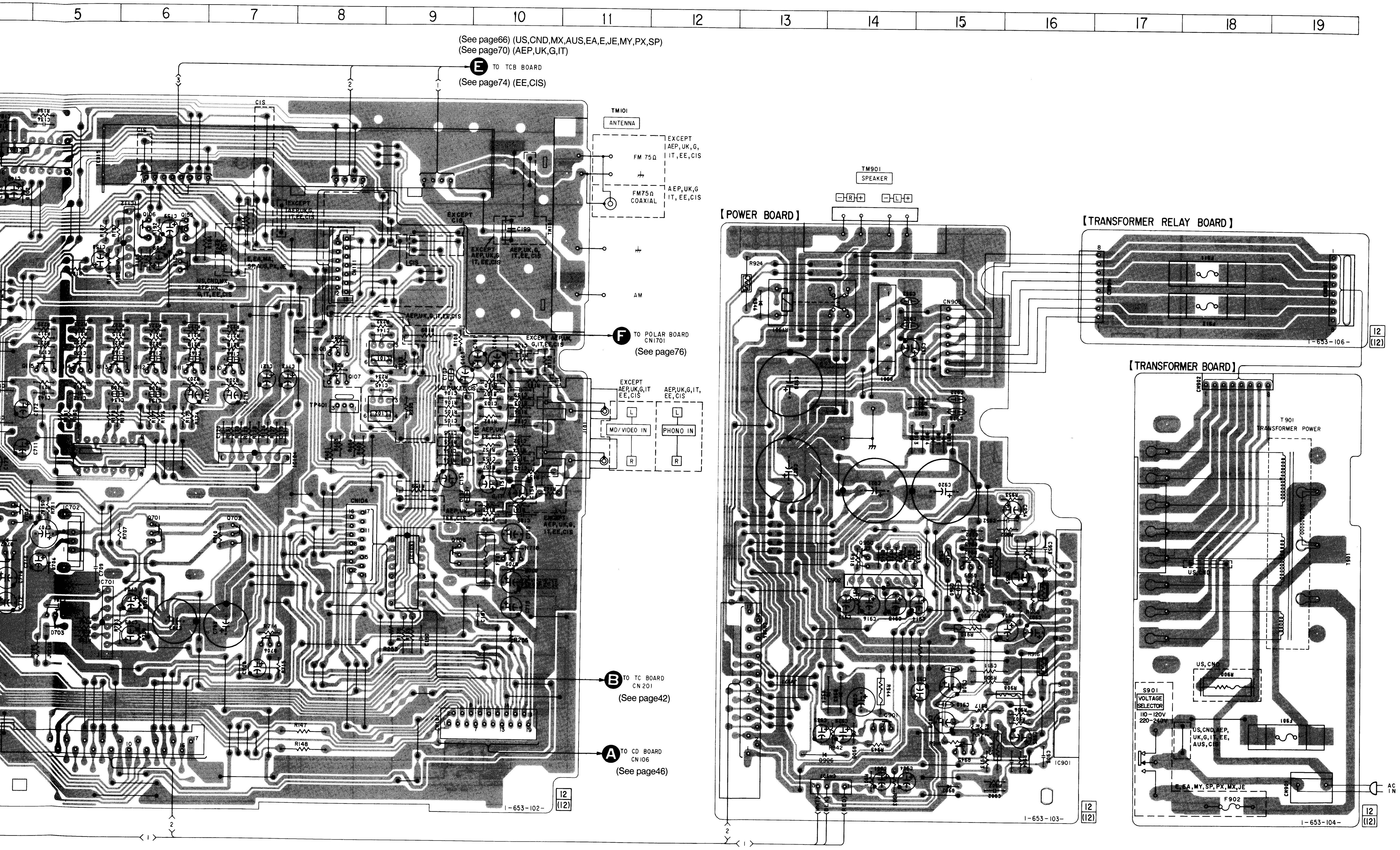
Note:

- ○—— : parts extracted from the component side.
- ░ : Pattern on the side which is seen.

● Abbreviations

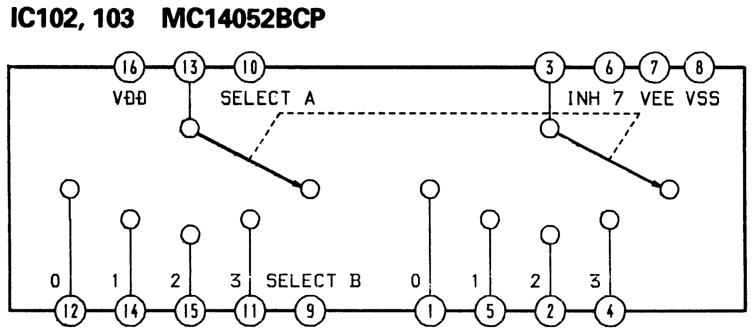
AUS : Australian
CND : Canadian
EA : Saudi Arabia
EE : East European
G : German
IT : Italian
JE : Tourist
MY : Malaysia
MX : Mexican
SP : Singapore

See page 25 for Circuit Boards Location.

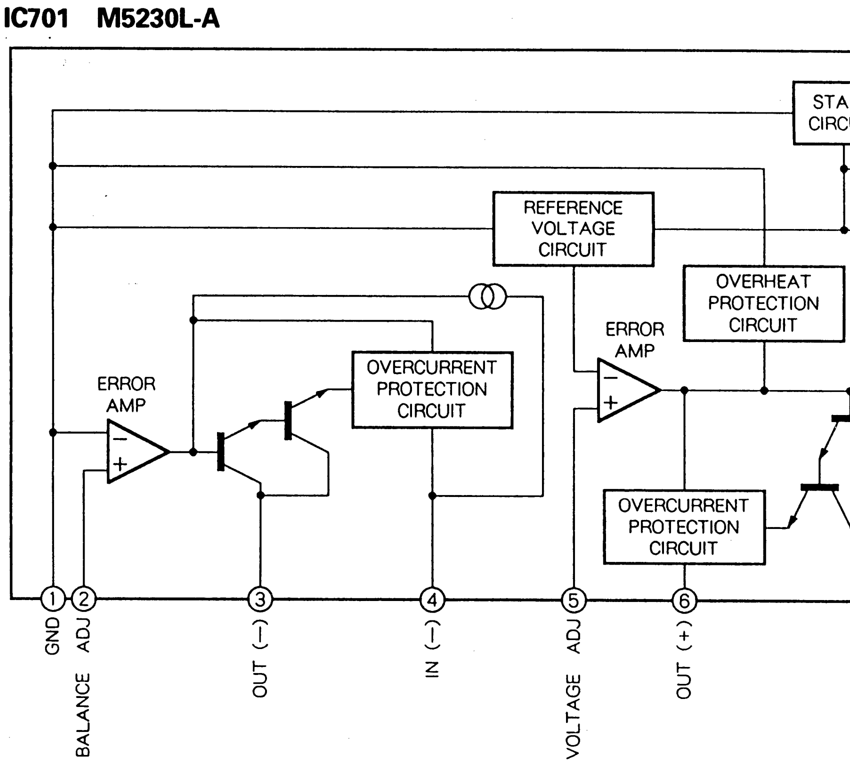

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
(See page66) (US,CND,MX,AUS,EA,E,JE,MY,PX,SP)
(See page70) (AEP,UK,G,IT)
E TO TCB BOARD
(See page74) (EE,CIS)
TM101
ANTENNA
FM 75Ω
EXCEPT AEP,UK,G, IT,EE,CIS
FM75Ω COAXIAL
AEP,UK,G IT,EE,CIS
AM
F TO POLAR BOARD CN1701
(See page76)
EXCEPT AEP,UK,G,IT EE,CIS
AEP,UK,G,IT, EE,CIS
MD/VIDEO IN
PHONO IN
L
R
B TO TC BOARD CN 201
(See page42)
A TO CD BOARD CN 106
(See page46)
1-653-102-
12 (12)
TM901
SPEAKER
【POWER BOARD】
1-653-103-
12 (12)
【TRANSFORMER RELAY BOARD】
1-653-106-
12 (12)
【TRANSFORMER BOARD】
T901
TRANSFORMER POWER
S901
VOLTAGE SELECTOR
110-120V
220-240V
US,CND
US,CND,AEP, UK,G,IT,EE, AUS,CIS
E,EA,MY,SP,PX,MX,JE
F902
AC IN
1-653-104-
12 (12)

- **IC Block Diagrams**

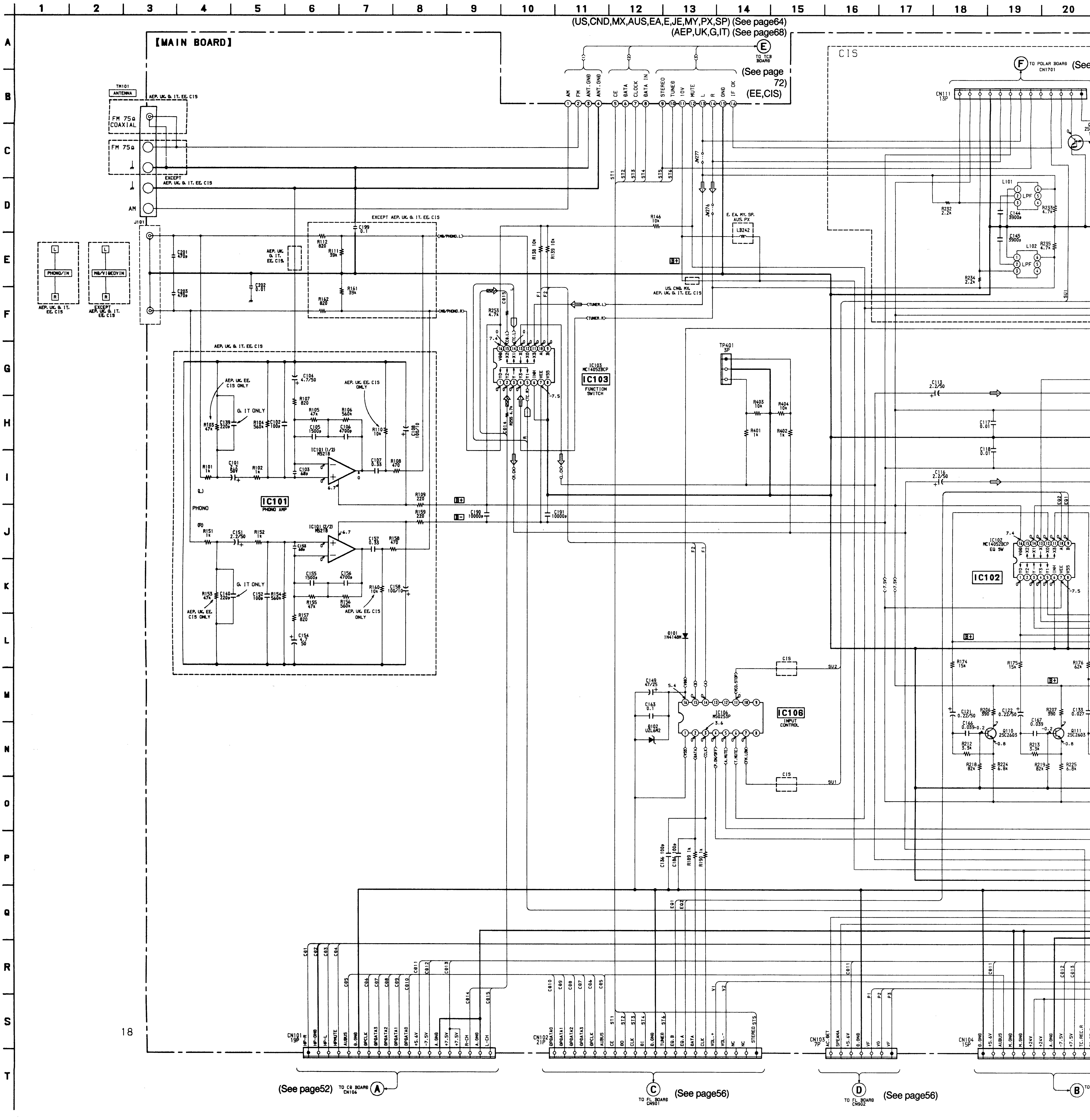
IC102, 103 MC14052BCP

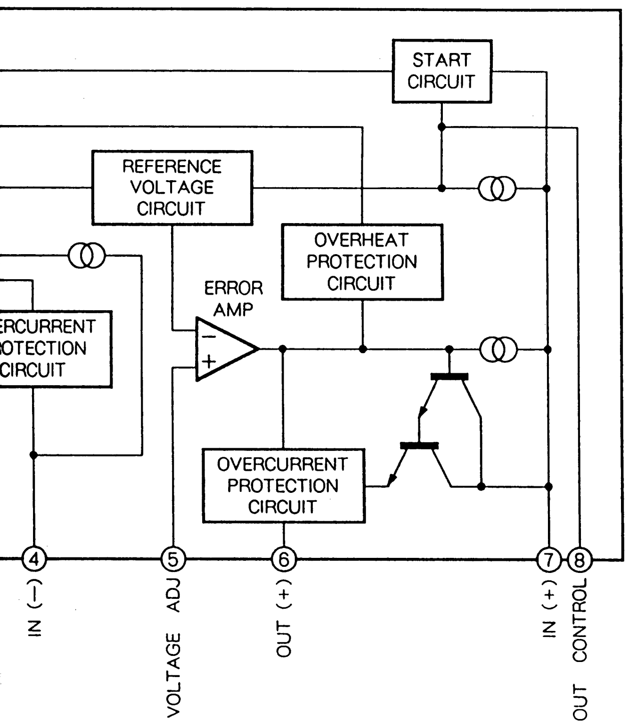

VDD
SELECT A
INH
7
VEE
VSS
SELECT B
16
13
10
3
6
7
8
0
1
2
3
12
14
15
11
9
1
5
2
4

IC701 M5230L-A

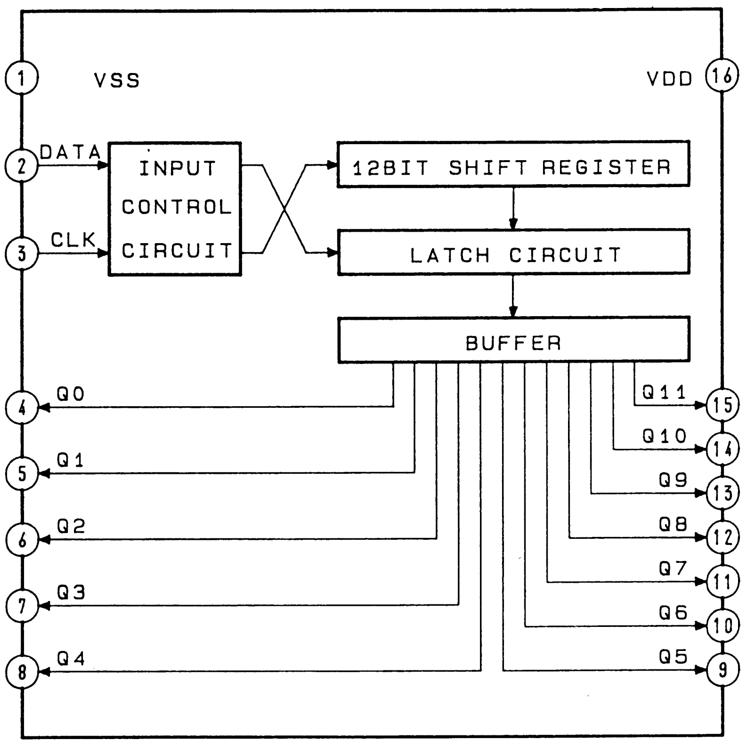

STA
CIRC
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
1
2
3
4
5
6
GND
BALANCE ADJ
OUT (−)
IN (−)
VOLTAGE ADJ
OUT (+)

4-6. SCHEMATIC DIAGRAM—MAIN Section—

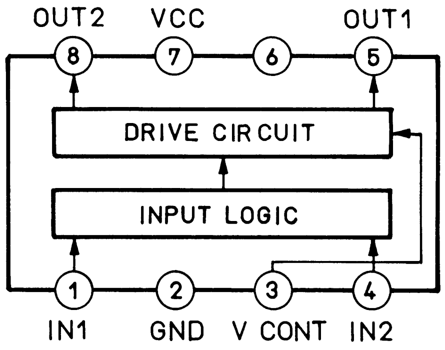

[MAIN BOARD]
(US,CND,MX,AUS,EA,E,JE,MY,PX,SP) (See page64)
(AEP,UK,G,IT) (See page68)
TO TCB BOARD
(See page 72)
(EE,CIS)
CIS
TO POLAR BOARD CN1701
TM101 ANTENNA
FM 75Ω COAXIAL
FM 75Ω
AM
J101
PHONO/IN
MD/VIDEO IN
IC101 PHONO AMP
IC103 MC14052BCP FUNCTION SWITCH
IC106 M50253P INPUT CONTROL
IC102 MC14052BCP EQ SW
TP401
CN101 15P
CN102 21P
CN103 7P
CN104 15P
(See page52) TO CD BOARD CN106
TO FL BOARD CN901 (See page56)
TO FL BOARD CN902 (See page56)
A
B
C
D
E
F
18


START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
ERCURRENT
OTECTION
CIRCUIT
OVERCURRENT PROTECTION CIRCUIT
4
5
6
7
8
IN (−)
VOLTAGE ADJ
OUT (+)
IN (+)
OUT CONTROL

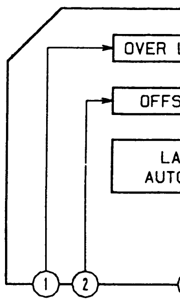
IC106 M50253P

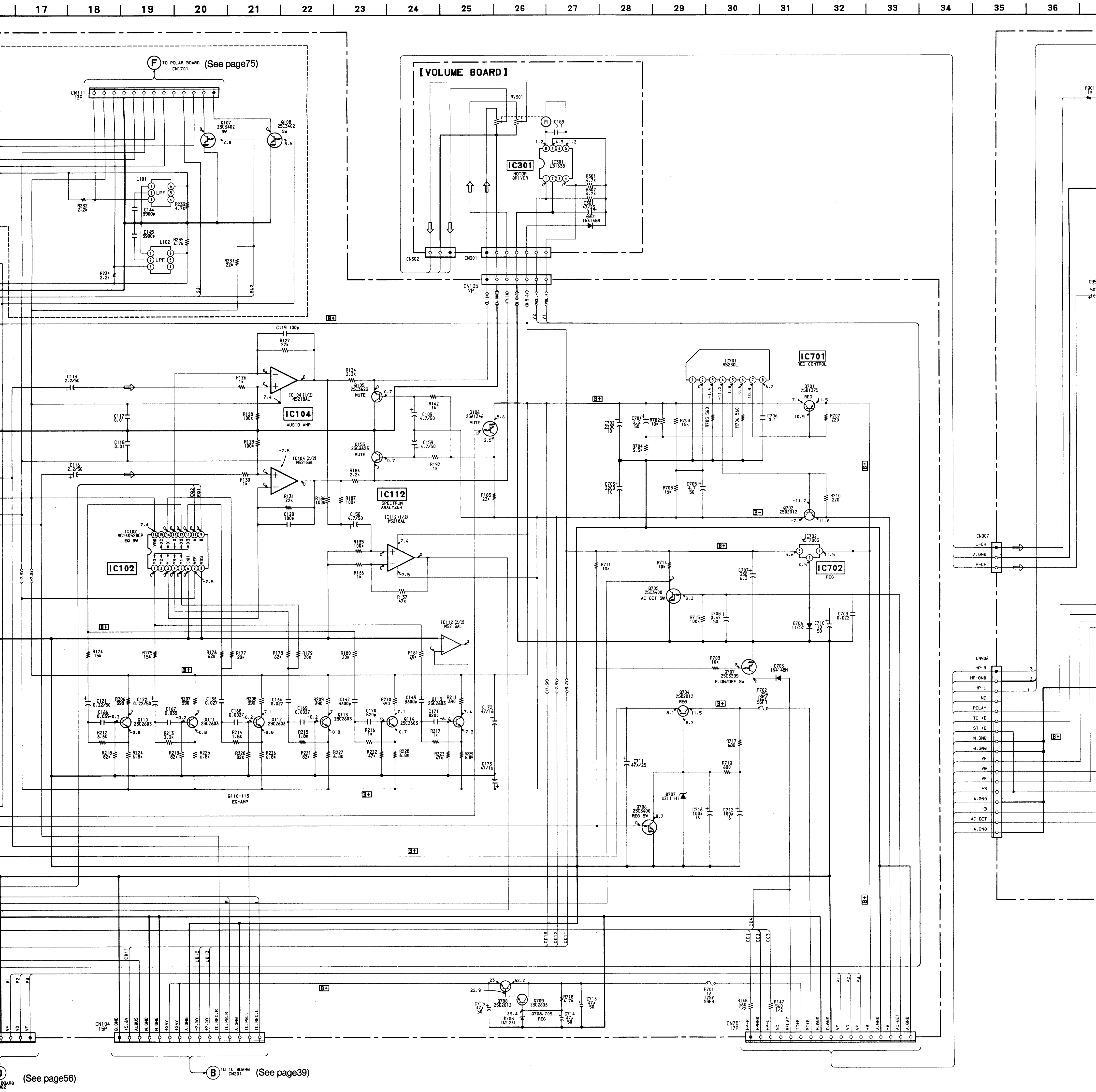

VSS
VDD
DATA
CLK
INPUT CONTROL CIRCUIT
12BIT SHIFT REGISTER
LATCH CIRCUIT
BUFFER
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

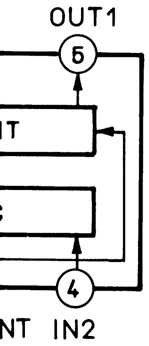
IC301 LB1639


OUT2
VCC
OUT1
8
7
6
5
DRIVE CIRCUIT
INPUT LOGIC
1
2
3
4
IN1
GND
V CONT
IN2

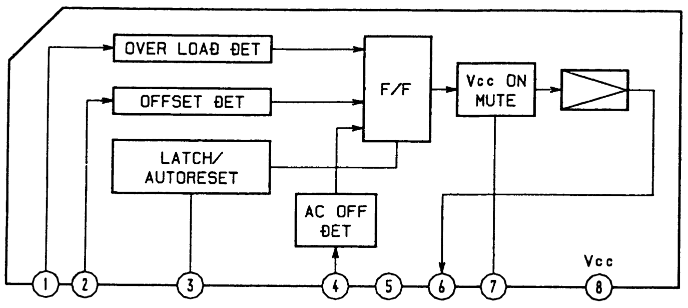
IC902 μPC12


OVER
OFFS
LA
AUTO
1
2


17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
F TO POLAR BOARD CN1701
(See page75)
CN111 13P
Q107 2SC3402 SW
Q108 2SC3402 SW
L101
LPF
L102
【VOLUME BOARD】
RV301
IC301 MOTOR DRIVER
IC301 LB1638
D301 1N4148M
CN302
CN301
CN105 7P
IC104 AUDIO AMP
IC104 (1/2) M5218AL
IC104 (2/2) M5218AL
Q105 2SC3623 MUTE
Q155 2SC3623 MUTE
Q106 2SA1346 MUTE
IC112 SPECTRUM ANALYZER
IC112 (1/2) M5218AL
IC112 (2/2) M5218AL
IC102
IC102 MC14052BCP EQ SW
Q110-115 EQ-AMP
IC701 M5230L
IC701 REG CONTROL
Q701 2SB1375 REG
Q702 2SD2012
IC702 MSP7805
IC702 REG
Q705 2SC3400 AC DET SW
Q707 2SC3399 P.ON/OFF SW
Q704 2SD2012 REG
Q706 2SC3400 REG SW
D707 UZL11H1
F702
F701
Q708 2SD2012
Q709 2SC2603
Q708,709 REG
CN907
L-CH
A.GND
R-CH
CN906
HP-R
HP-GND
HP-L
NC
RELAY
TC +B
ST +B
M.GND
D.GND
VF
VD
+B
-B
AC-DET
CN104 15P
CN701 17P
(See page56)
B TO TC BOARD CN201
(See page39)


OUT1
5
IT
4
NT IN2

IC902 μPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/ AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc
1
2
3
4
5
6
7
8

Note:

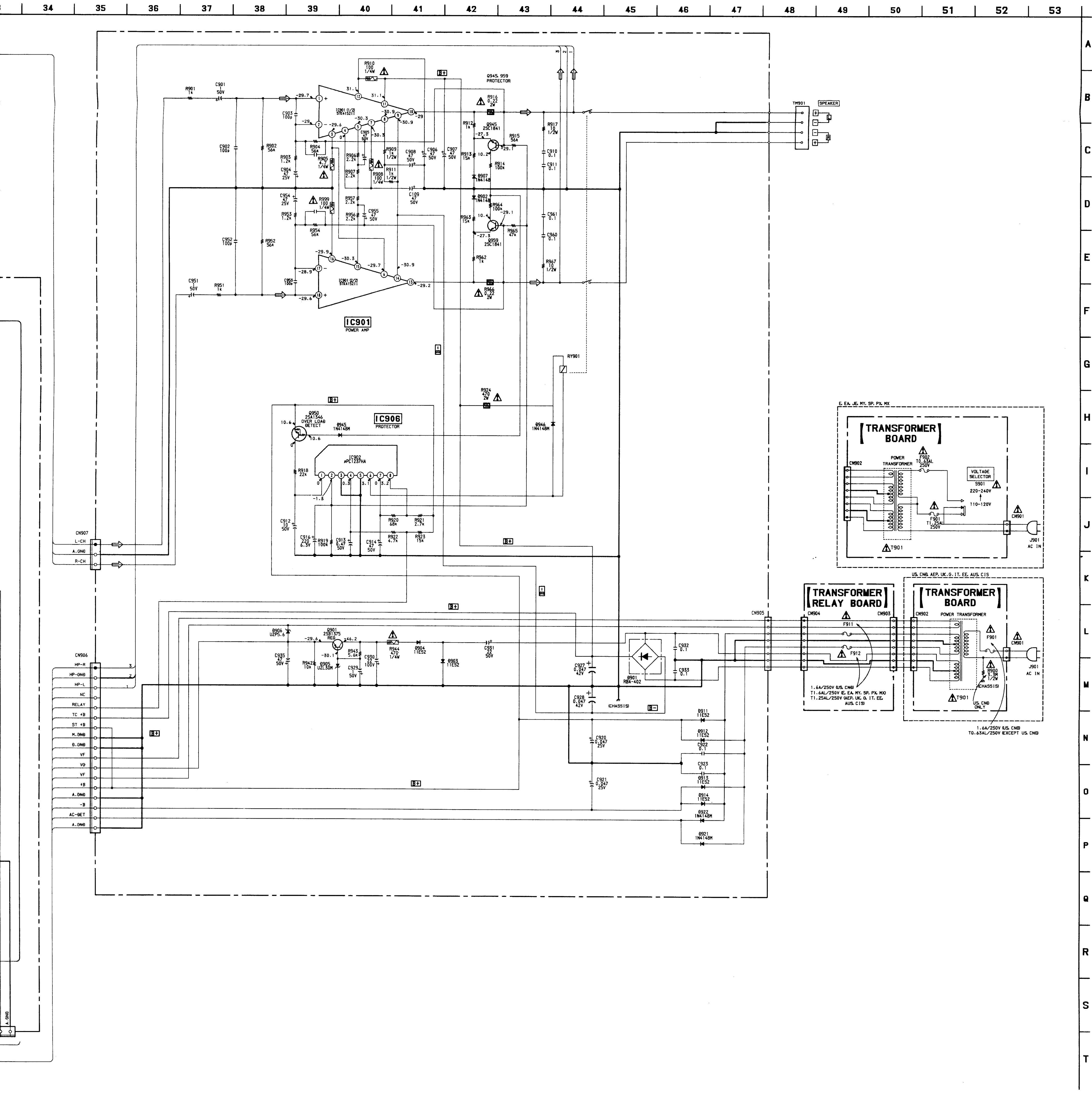
- : nonflammable resistor.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- Voltage are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⟫ : REC (DECK B)
  ▷ : PB (DECK B)

- Abbreviations

AUS	Australian
CND	Canadian
EA	Saudi Arabia
EE	East European
G	German
IT	Italian
JE	Tourist
MY	Malaysia
MX	Mexican
SP	Singapore


34
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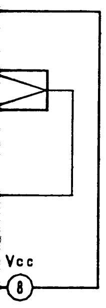
47
48
49
50
51
52
53
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
IC901
POWER AMP
IC906
PROTECTOR
IC902 μPC1237HA
Q945, 959 PROTECTOR
Q950 2SA1346 OVER LOAD DETECT
Q945 2SC1841
Q959 2SC1841
Q901 2SB1375 REG
D901 RBA-402
RY901
TM901
SPEAKER
CN907
L-CH
A.GND
R-CH
CN906
HP-R
HP-GND
HP-L
NC
RELAY
TC +B
ST +B
M.GND
D.GND
VF
VD
VF
+B
A.GND
-B
AC-DET
A.GND
CN905
TRANSFORMER RELAY BOARD
CN904
CN903
F911
F912
1.6A/250V (US, CND)
T1.6AL/250V (E, EA, MY, SP, PX, MX)
T1.25AL/250V (AEP, UK, G, IT, EE, AUS, CIS)
E, EA, JE, MY, SP, PX, MX
TRANSFORMER BOARD
CN902
POWER TRANSFORMER
F902 T0.63AL 250V
VOLTAGE SELECTOR
S901
220-240V
110-120V
F901 T1.25AL 250V
CN901
J901 AC IN
T901
US, CND, AEP, UK, G, IT, EE, AUS, CIS
TRANSFORMER BOARD
F901
R900 3.9M 1/2W
(CHASSIS)
US, CND ONLY
1.6A/250V (US, CND)
T0.63AL/250V (EXCEPT US, CND)
(CHASSIS)
B+
B-



Note:

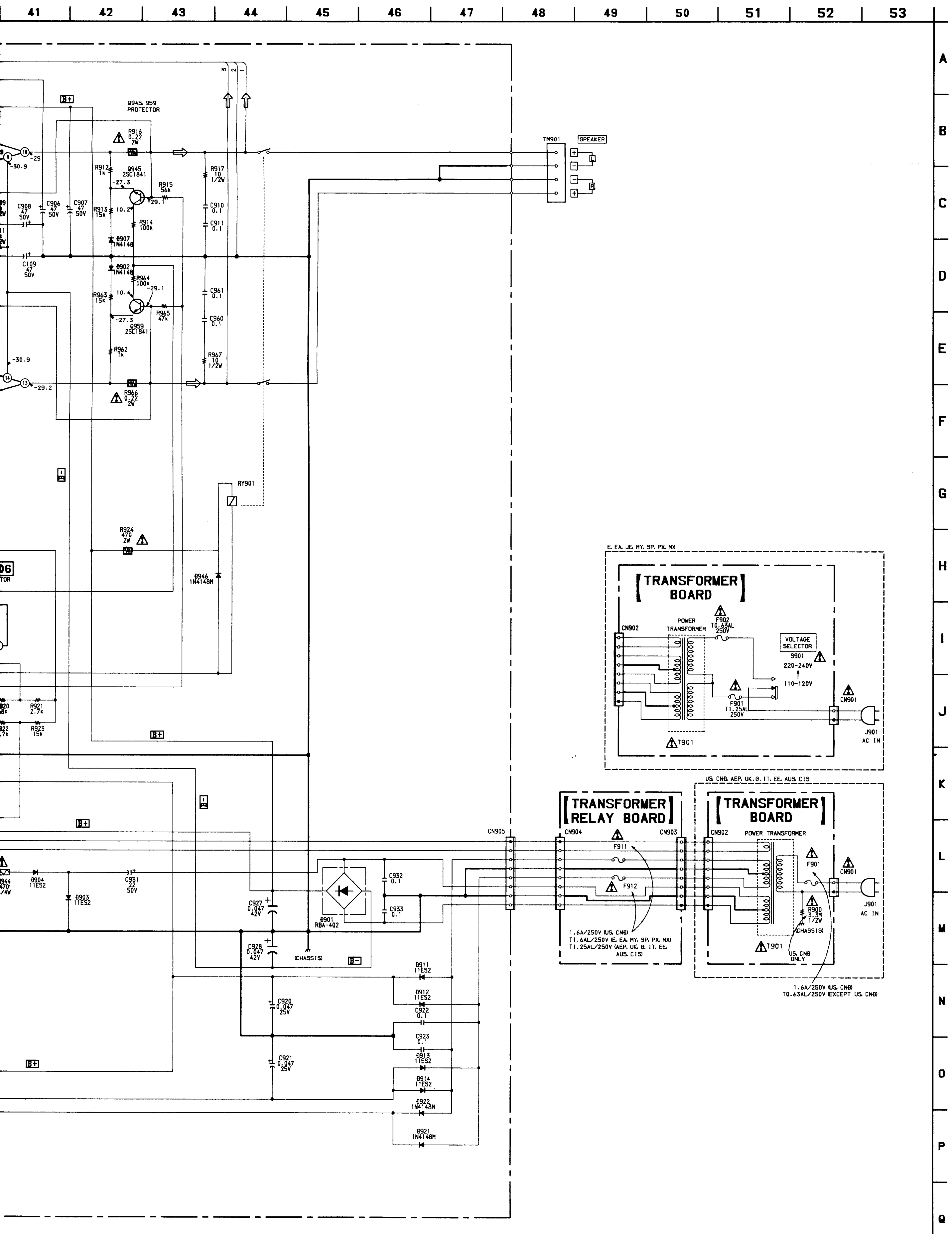
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- Voltage are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⟫ : REC (DECK B)
  ▷ : PB (DECK B)

- Abbreviations

AUS	Australian
CND	Canadian
EA	Saudi Arabia
EE	East European
G	German
IT	Italian
JE	Tourist
MY	Malaysia
MX	Mexican
SP	Singapore


41
42
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47
48
49
50
51
52
53
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
Q945, 959
PROTECTOR
R916 0.22 2W
R912 1k
Q945 2SC1841
R915 56k
R917 10 1/2W
C910 0.1
C911 0.1
R914 100k
D907 1N4148
C908 47 50V
C906 47 50V
C907 47 50V
R913 15k
C109 47 50V
D902 1N4148
R964 100k
R963 15k
C961 0.1
C960 0.1
Q959 2SC1841
R965 47k
R962 1k
R967 10 1/2W
R966 0.22 2W
-50.9
-29
-27.3
10.2
29.1
10.4
-29.1
-30.9
-29.2
TM901
SPEAKER
RY901
R924 470 2W
D946 1N4148M
R920
R921 2.7k
R922
R923 15k
D904 11ES2
D903 11ES2
C931 22 50V
C927 0.047 42V
C928 0.047 42V
D901 RBA-402
(CHASSIS)
C932 0.1
C933 0.1
D911 11ES2
D912 11ES2
C922 0.1
C923 0.1
D913 11ES2
D914 11ES2
D922 1N4148M
D921 1N4148M
C920 0.047 25V
C921 0.047 25V
CN905
E, EA, JE, MY, SP, PX, MX
TRANSFORMER BOARD
CN902
POWER TRANSFORMER
F902 T0.63AL 250V
VOLTAGE SELECTOR
S901
220-240V
110-120V
F901 T1.25AL 250V
T901
CN901
J901 AC IN
US, CND, AEP, UK, G, IT, EE, AUS, CIS
TRANSFORMER RELAY BOARD
CN904
CN903
F911
F912
1.6A/250V (US, CND)
T1.6AL/250V (E, EA, MY, SP, PX, MX)
T1.25AL/250V (AEP, UK, G, IT, EE, AUS, CIS)
TRANSFORMER BOARD
CN902
POWER TRANSFORMER
F901
R902 3.3M 1/2W
(CHASSIS)
US, CND ONLY
T901
CN901
J901 AC IN
1.6A/250V (US, CND)
T0.63AL/250V (EXCEPT US, CND)

Note:

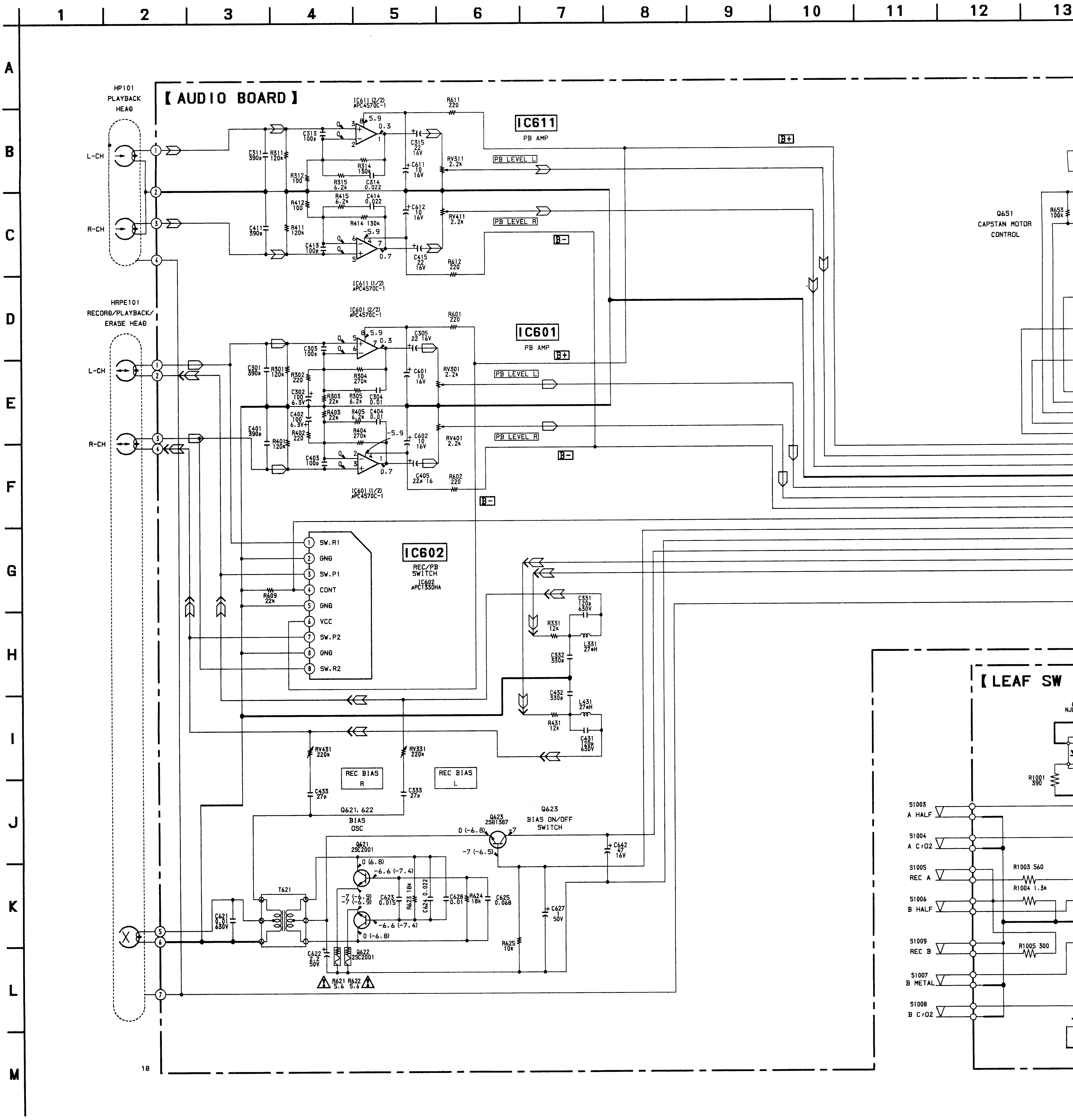
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄W or less unless otherwise specified.
- ⊟∿ : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- ▭ : adjustment for repair.

- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY BACK
  ( ): REC
- Voltages are taken with a VOM (Input Impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ⊐ : PB (DECK A)
  ⊐⊐ : REC (DECK B)
  ⊐ : PB (DECK B)

4-7. SCHEMATIC DIAGRAM—TC Section—



1
2
3
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9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
K
L
M
HP101 PLAYBACK HEAD
L-CH
R-CH
HRPE101 RECORD/PLAYBACK/ERASE HEAD
[AUDIO BOARD]
IC611 (2/2) μPC4570C-1
IC611 (1/2) μPC4570C-1
IC611
PB AMP
IC601 (2/2) μPC4570C-1
IC601 (1/2) μPC4570C-1
IC601
PB AMP
PB LEVEL L
PB LEVEL R
B+
B–
IC602
REC/PB SWITCH
IC602 μPC1330HA
SW.R1
GND
SW.P1
CONT
GND
VCC
SW.P2
GND
SW.R2
R609 22k
C313 100p
C311 390p
R311 120k
R312 100
R314 130k
R315 6.2k
C314 0.022
C315 22 16V
C611 10 16V
RV311 2.2k
R611 220
R412 100
R415 6.2k
C414 0.022
R414 130k
C411 390p
R411 120k
C413 100p
C612 10 16V
RV411 2.2k
C415 22 16V
R612 220
C303 100p
C301 390p
R301 120k
R302 220
C302 100 6.3V
R303 22k
R304 270k
R305 6.2k
C304 0.01
C305 22 16V
C601 10 16V
RV301 2.2k
R601 220
C402 100 6.3V
R403 22k
R405 6.2k
C404 0.01
R404 270k
R402 220
C401 390p
R401 120k
C403 100p
C602 10 16V
RV401 2.2k
C405 22 16
R602 220
5.9
0.3
-5.9
0.7
C331 120p 630V
R331 12k
L331 27mH
C332 330p
C432 330p
L431 27mH
R431 12k
C431 120p 630V
RV431 220k
RV331 220k
REC BIAS R
REC BIAS L
C433 27p
C333 27p
Q621, 622 BIAS OSC
Q623 2SB1387
Q623 BIAS ON/OFF SWITCH
0 (-6.8)
-7 (-6.5)
C642 47 16V
Q621 2SC2001
0 (6.8)
-6.6 (-7.4)
-7 (-6.9)
-7 (-6.8)
C623 0.015
R623 18k
C624 0.022
C628 0.01
R624 18k
C625 0.068
C627 1 50V
R625 10k
T621
C621 0.01 630V
C622 2.2 50V
Q622 2SC2001
R621 5.6
R622 5.6
-6.6 (-7.4)
0 (-6.8)
Q651 CAPSTAN MOTOR CONTROL
R653 100k
[LEAF SW
R1001 390
S1003 A HALF
S1004 A CrO2
S1005 REC A
S1006 B HALF
S1009 REC B
S1007 B METAL
S1008 B CrO2
R1003 560
R1004 1.3k
R1005 300
18

are dc with respect to ground
ns.

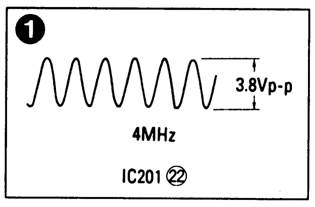
VOM (Input Impedance 10MΩ).
be noted due to normal produc-

n a oscilloscope.
be noted due to normal produc-

waveforms.

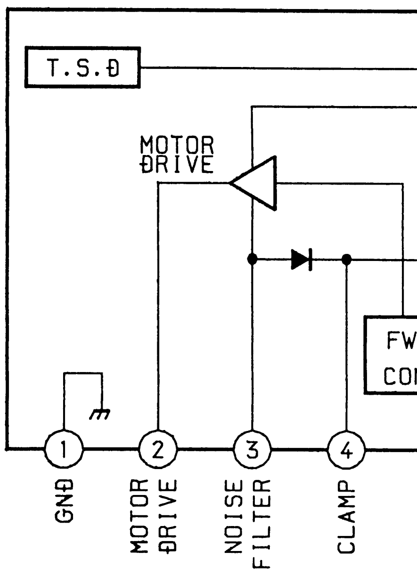
(DECK A)
C (DECK B)
(DECK B)

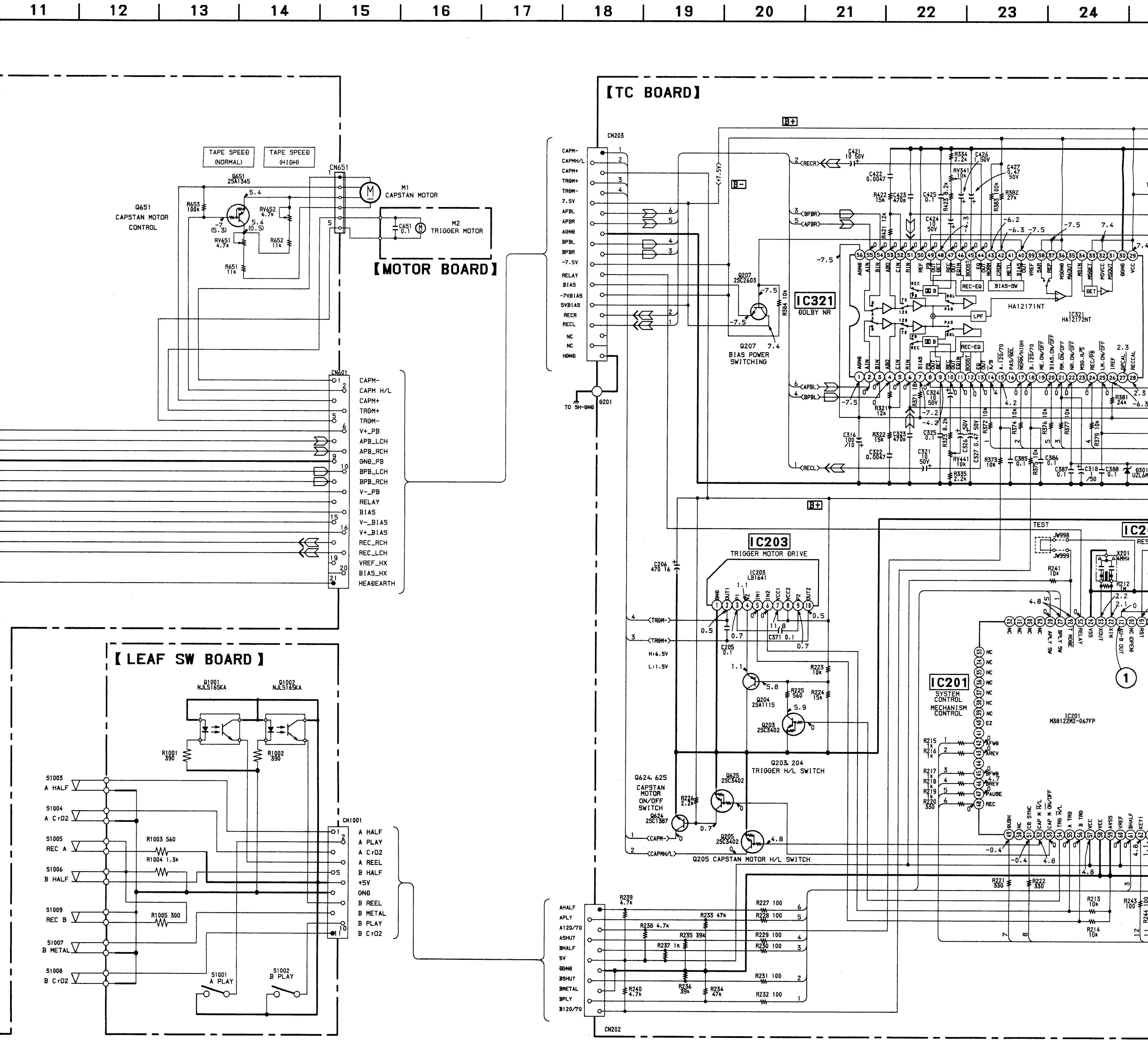
• Waveform



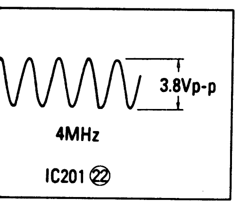
• IC Block Diagrams

IC203 LB1641


T.S.D
MOTOR DRIVE
FW
CO
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP

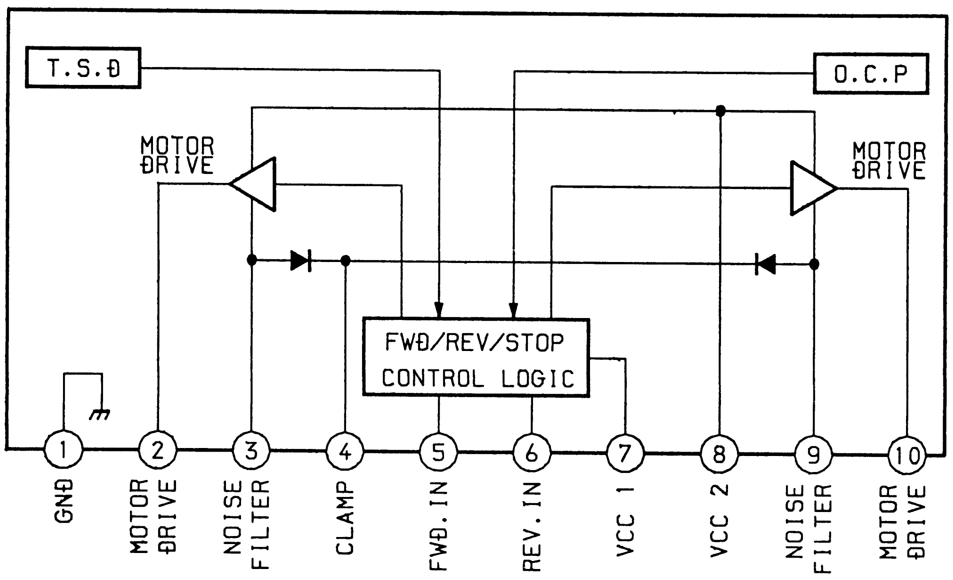

11
12
13
14
15
16
17
18
19
20
21
22
23
24
【MOTOR BOARD】
TAPE SPEED (NORMAL)
TAPE SPEED (HIGH)
Q651 2SA1345
Q651 CAPSTAN MOTOR CONTROL
M1 CAPSTAN MOTOR
M2 TRIGGER MOTOR
CN651
RV651 4.7k
RV652 4.7k
R651 11k
R652 11k
R653 100k
C651 0.1
CN601
CAPM-
CAPM H/L
CAPM+
TRGM+
TRGM-
V+_PB
APB_LCH
APB_RCH
GND_PB
BPB_LCH
BPB_RCH
V-_PB
RELAY
BIAS
V-_BIAS
V+_BIAS
REC_RCH
REC_LCH
VREF_HX
BIAS_HX
HEADEARTH
【LEAF SW BOARD】
Q1001 NJL5165KA
Q1002 NJL5165KA
R1001 390
R1002 390
R1003 560
R1004 1.3k
R1005 300
S1003 A HALF
S1004 A CrO2
S1005 REC A
S1006 B HALF
S1009 REC B
S1007 B METAL
S1008 B CrO2
S1001 A PLAY
S1002 B PLAY
CN1001
A HALF
A PLAY
A CrO2
A REEL
B HALF
+5V
GND
B REEL
B METAL
B PLAY
B CrO2
【TC BOARD】
CN203
CAPM-
CAPMH/L
CAPM+
TRGM+
TRGM-
7.5V
APBL
APBR
AGND
BPBL
BPBR
-7.5V
RELAY
BIAS
-7VBIAS
5VBIAS
RECR
RECL
NC
NC
HGND
TO SH-GND
Q201
IC321 DOLBY NR
HA12171NT
IC321 HA12172NT
Q207 2SC2603
Q207 BIAS POWER SWITCHING
REC-EQ
BIAS-SW
LPF
IC203 TRIGGER MOTOR DRIVE
IC203 LB1641
Q204 2SA1115
Q203 2SC3402
Q203, 204 TRIGGER H/L SWITCH
Q624, 625 CAPSTAN MOTOR ON/OFF SWITCH
Q624 2SC1587
Q625 2SC3402
Q205 2SC3402
Q205 CAPSTAN MOTOR H/L SWITCH
H:6.5V
L:1.5V
C206 470 16
IC201 SYSTEM CONTROL MECHANISM CONTROL
IC201 M38122M2-067FP
TEST
JW998
JW999
X201 4MHz
R241 10k
R212 1M
R215 1k
R216 1k
R217 1k
R218 1k
R219 1k
R220 330
R221 330
R222 330
R213 10k
R214 10k
R243 100
R244 100
CN202
AHALF
APLY
A120/70
ASHUT
BHALF
5V
GGND
BSHUT
BMETAL
BPLY
B120/70
R239 4.7k
R238 4.7k
R237 1k
R233 47k
R235 39k
R236 39k
R234 47k
R240 4.7k
R227 100
R228 100
R229 100
R230 100
R231 100
R232 100
R223 10k
R224 15k
R225 560
C205 0.1
C371 0.1
B+
B-

veform

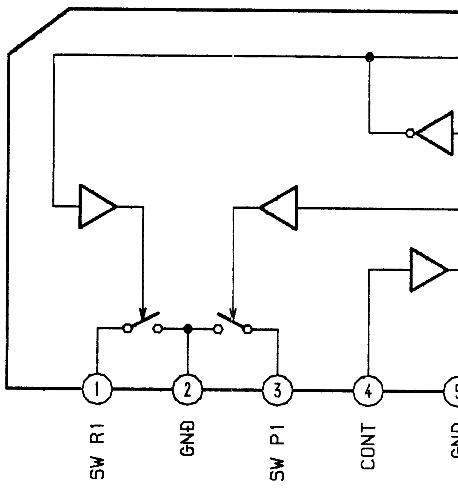


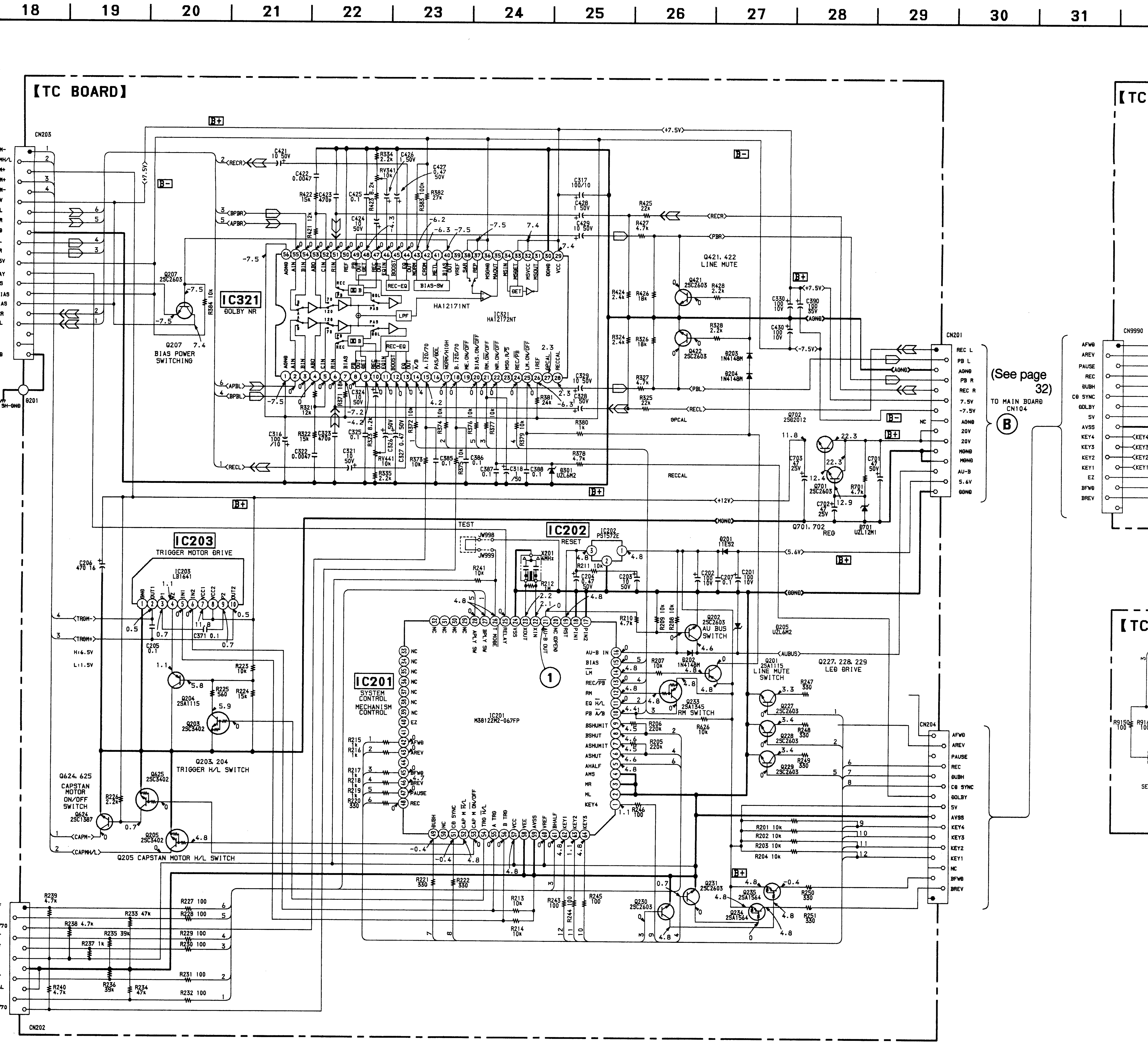
• IC Block Diagrams

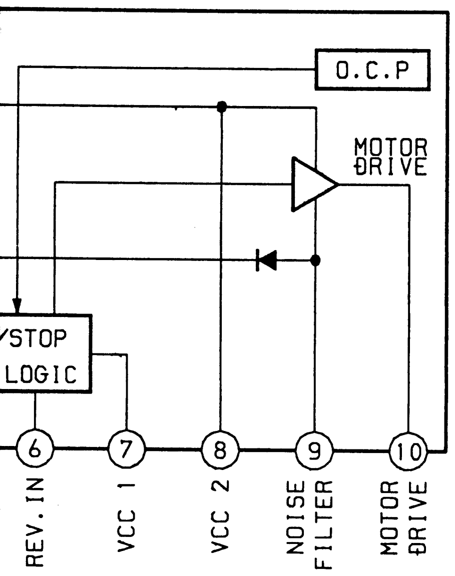
IC203 LB1641


T.S.Ð
O.C.P
MOTOR ÐRIVE
MOTOR ÐRIVE
FWÐ/REV/STOP CONTROL LOGIC
1 GNÐ
2 MOTOR ÐRIVE
3 NOISE FILTER
4 CLAMP
5 FWÐ.IN
6 REV.IN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR ÐRIVE

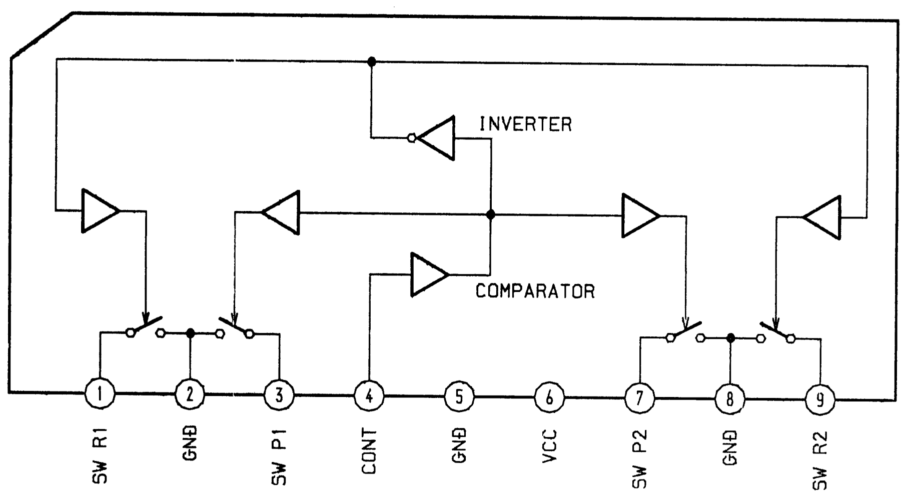
IC602 μPC1330HA


1 SW R1
2 GNÐ
3 SW P1
4 CONT


18 19 20 21 22 23 24 25 26 27 28 29 30 31
【TC BOARD】
CN203
CN201
CN202
CN204
CN9990
IC321
DOLBY NR
HA12171NT
IC321 HA12172NT
Q207 2SC2603
Q207 BIAS POWER SWITCHING
Q421, 422 LINE MUTE
Q421 2SC2603
Q422 2SC2603
D203 1N4148M
D204 1N4148M
D301 UZL6M2
(See page 32)
TO MAIN BOARD CN104
B
Q702 2SD2012
Q701 2SC2603
Q701, 702 REG
D701 UZL12M1
IC203
TRIGGER MOTOR DRIVE
IC203 LB1641
Q204 2SA1115
Q203 2SC3402
Q203, 204 TRIGGER H/L SWITCH
Q624, 625 CAPSTAN MOTOR ON/OFF SWITCH
Q624 2SC1387
Q625 2SC3402
Q205 2SC3402
Q205 CAPSTAN MOTOR H/L SWITCH
IC202
IC202 PST572E
RESET
TEST
JW998
JW999
X201 4MHz
D201 11ES2
IC201
SYSTEM CONTROL MECHANISM CONTROL
IC201 M38122M2-067FP
Q202 2SC2603 AU BUS SWITCH
D202 1N4148M
D205 UZL6M2
Q201 2SA1115 LINE MUTE SWITCH
Q233 2SA1345 RM SWITCH
Q227, 228, 229 LED DRIVE
Q227 2SC2603
Q228 2SC2603
Q229 2SC2603
Q230 2SC2603
Q231 2SC2603
Q234 2SA1564
Q235 2SA1564
REC L
PB L
AGND
PB R
REC R
7.5V
-7.5V
AGND
20V
20V
MGND
MGND
AU-B
5.6V
DGND
AFWD
AREV
PAUSE
REC
DUBH
CD SYNC
DOLBY
5V
AVSS
KEY4
KEY3
KEY2
KEY1
EZ
BFWD
BREV
NC
<+7.5V>
<+12V>
<5.6V>
<RECR>
<RECL>
<PBR>
<PBL>
<AGND>
<MGND>
<DGND>
<AUBUS>
<TRGM->
<TRGM+>
<CAPM->
<CAPMH/L>
<APBR>
<BPBR>
<APBL>
<BPBL>
DPCAL
RECCAL
H:6.5V
L:1.5V
B+
B-


O.C.P
MOTOR DRIVE
STOP LOGIC
6
7
8
9
10
REV.IN
VCC 1
VCC 2
NOISE FILTER
MOTOR DRIVE

IC602 μPC1330HA


INVERTER
COMPARATOR
1
2
3
4
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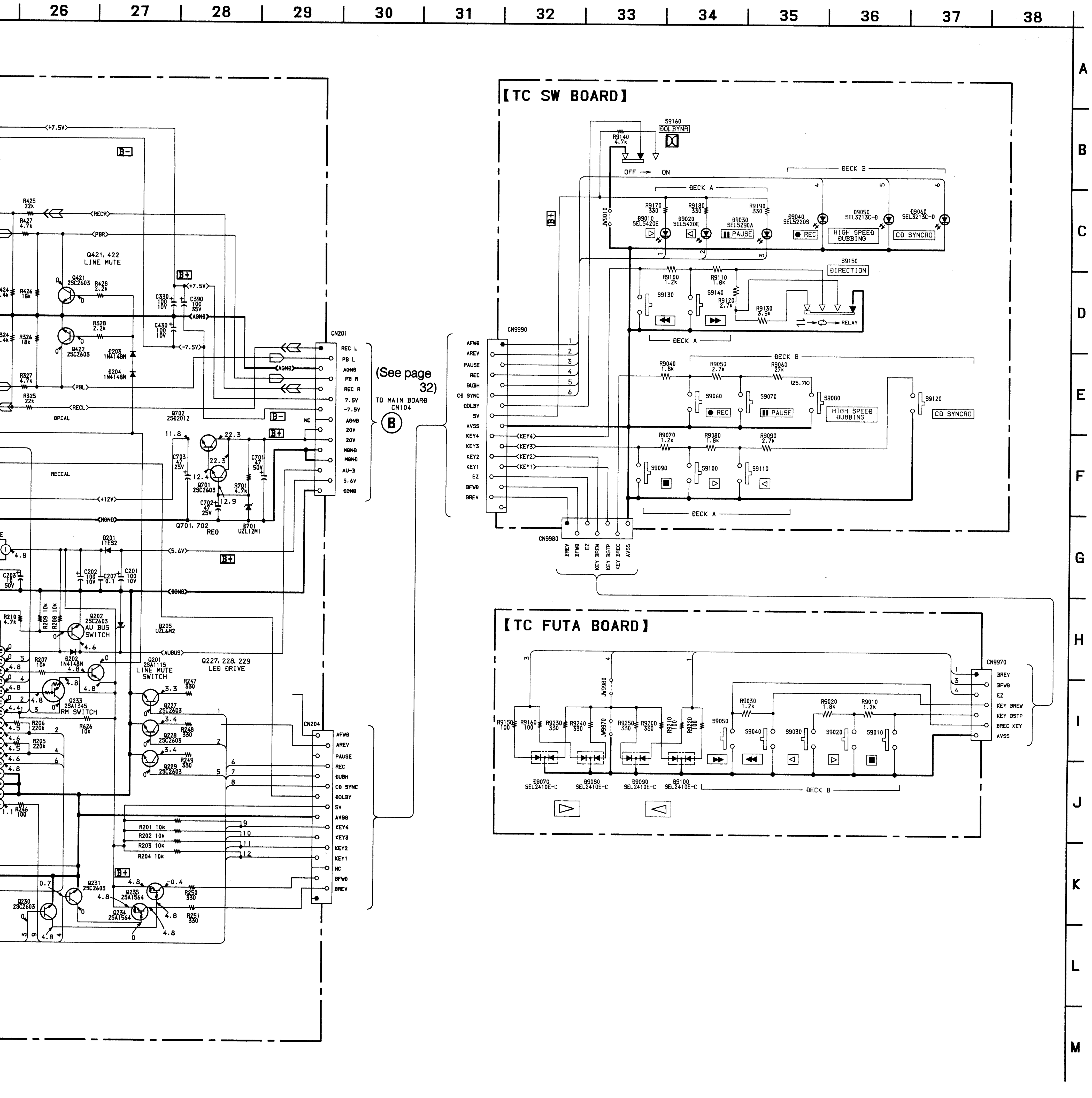
6
7
8
9
SW R1
GND
SW P1
CONT
GND
VCC
SW P2
GND
SW R2


26
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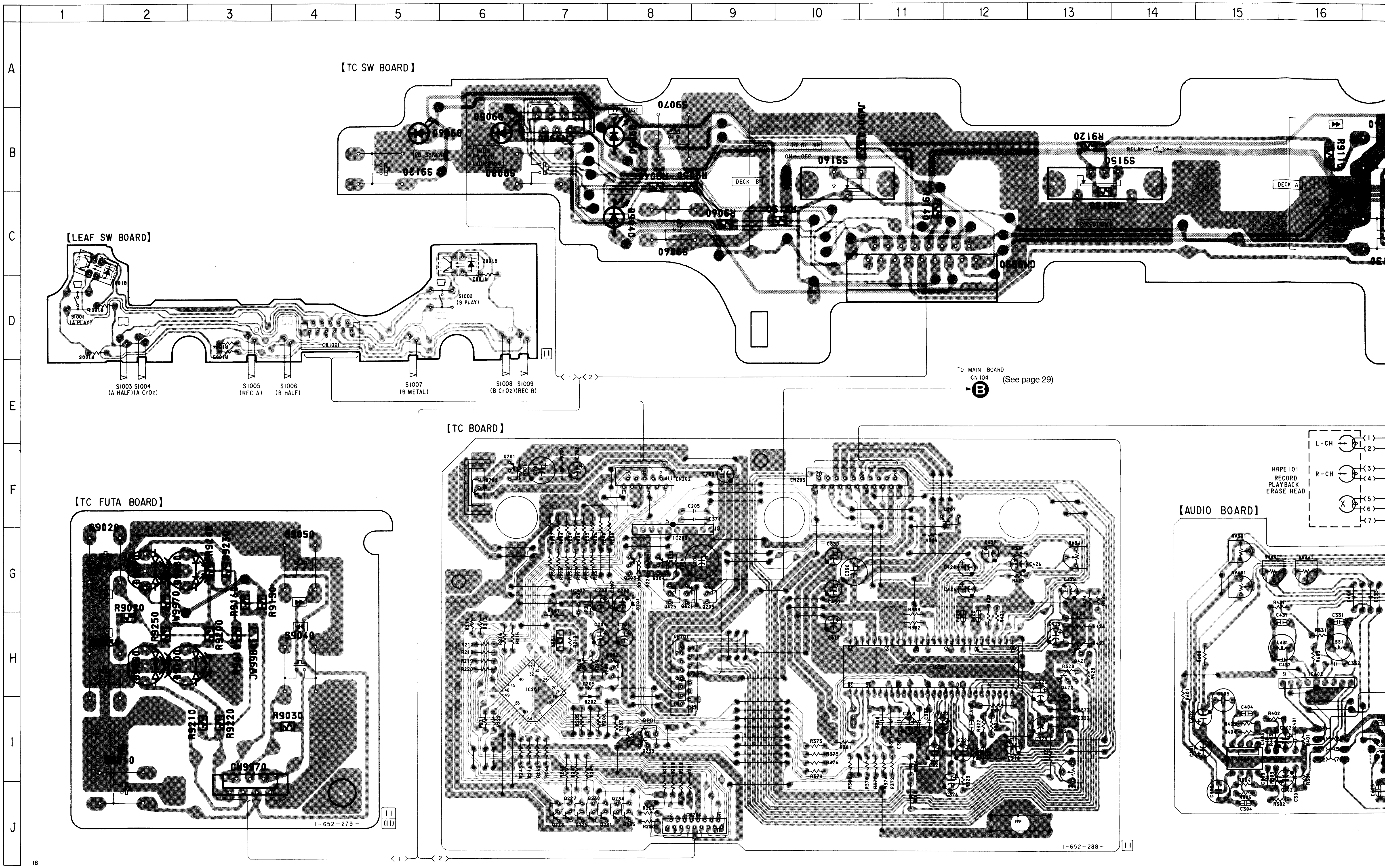
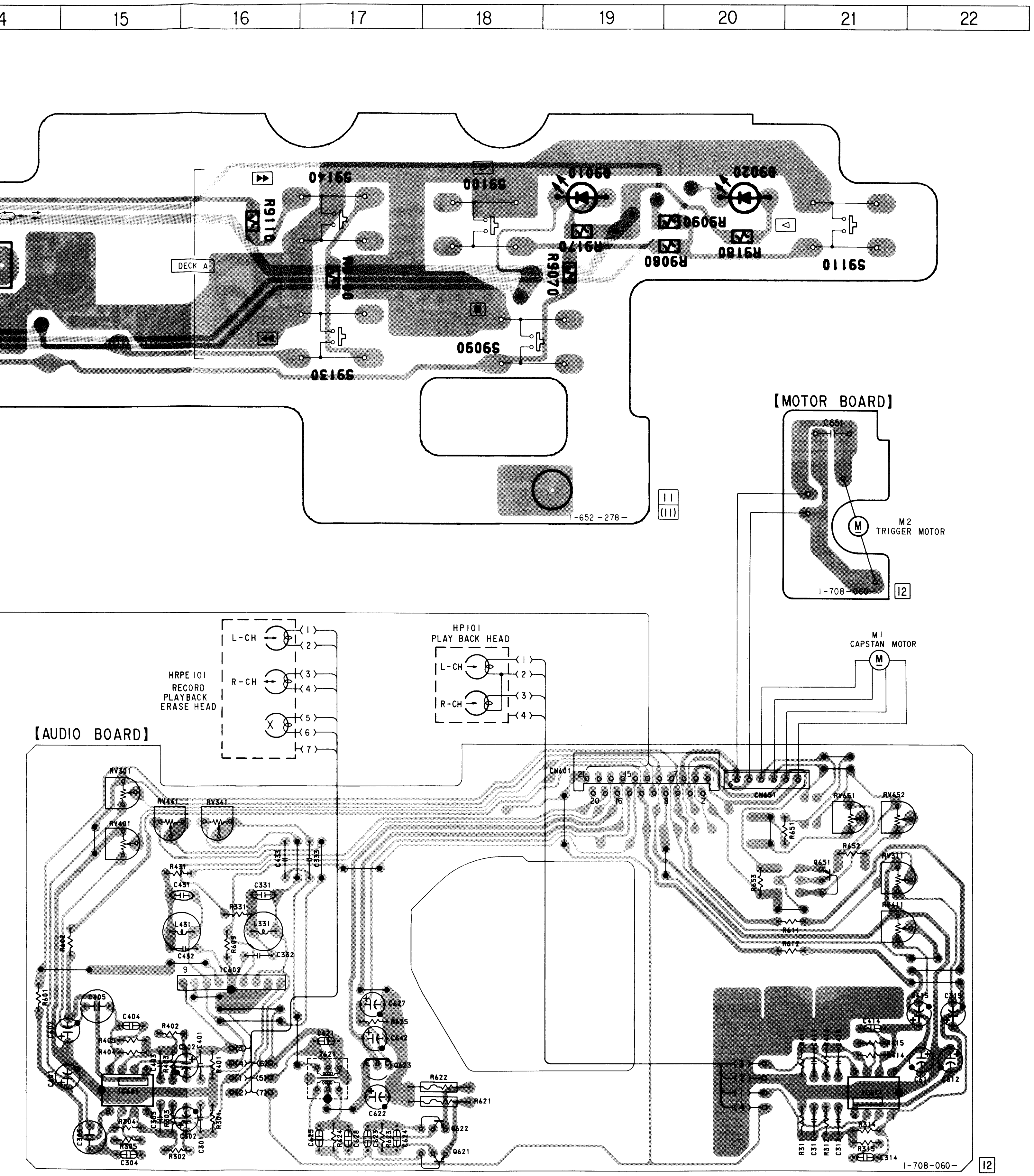
38
A
B
C
D
E
F
G
H
I
J
K
L
M
【TC SW BOARD】
【TC FUTA BOARD】
CN201
CN204
CN9990
CN9980
CN9970
(See page 32)
TO MAIN BOARD CN104
B
Q421, 422 LINE MUTE
Q701, 702 REG
Q201 2SA1115 LINE MUTE SWITCH
Q202 2SC2603 AU BUS SWITCH
Q227, 228, 229 LED DRIVE
Q233 2SA1345 RM SWITCH
S9160 DOLBYNR
OFF → ON
DECK A
DECK B
S9150 DIRECTION
RELAY
REC
PAUSE
HIGH SPEED DUBBING
CD SYNCRO
REC L
PB L
AGND
PB R
REC R
7.5V
-7.5V
20V
MGND
AU-B
5.6V
DGND
AFWD
AREV
DUBH
CD SYNC
DOLBY
5V
AVSS
KEY4
KEY3
KEY2
KEY1
EZ
BFWD
BREV
KEY BREW
KEY BSTP
BREC KEY
D9070 SEL2410E-C
D9080 SEL2410E-C
D9090 SEL2410E-C
D9100 SEL2410E-C

4-8. PRINTED WIRING BOARDS—TC Section—

• See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.



【TC SW BOARD】
【LEAF SW BOARD】
【TC FUTA BOARD】
【TC BOARD】
【AUDIO BOARD】
S1001 (A PLAY)
S1002 (B PLAY)
S1003 S1004 (A HALF)(A CrO2)
S1005 (REC A)
S1006 (B HALF)
S1007 (B METAL)
S1008 S1009 (B CrO2)(REC B)
CN1001
CN9990
CN9970
CN202
CN203
CN201
CN204
IC201
IC203
IC202
IC321
IC401
TO MAIN BOARD CN104
B
(See page 29)
HRPE101 RECORD PLAYBACK ERASE HEAD
L-CH
R-CH
DECK A
DECK B
DOLBY NR
ON — OFF
CD SYNCRO
HIGH SPEED DUBBING
PAUSE
RELAY
S9020
S9050
S9040
S9070
S9060
S9120
S9160
S9150
R9030
R9120
R9210
1-652-279-
1-652-288-


14
15
16
17
18
19
20
21
22
DECK A
S9140
S9100
D9010
D9020
R9110
R9090
R9170
R9070
R9080
R9180
S9110
S9090
S9130
1-652-278-
11
(11)
[MOTOR BOARD]
C651
M2
TRIGGER MOTOR
1-708-060-
12
HP101
PLAY BACK HEAD
L-CH
R-CH
M1
CAPSTAN MOTOR
HRPE101
RECORD
PLAYBACK
ERASE HEAD
[AUDIO BOARD]
RV301
RV401
RV441
RV341
CN601
CN651
RV651
RV652
RV311
RV411
Q651
R651
R652
R653
R611
R612
C431
C331
R431
R331
L431
L331
C432
C332
C433
C333
IC402
IC401
IC611
C404
R402
R403
R404
C405
C627
R625
C642
C621
R621
Q623
R622
C622
Q622
Q621
C614
C615
R614
R615
C314
1-708-060-
12

•Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	G-8	Q202	H-8
D202	H-7	Q203	G-8
D203	J-11	Q204	G-8
D204	I-11	Q205	G-9
D205	H-7	Q207	F-11
D301	I-11	Q227	J-7
D701	F-7	Q228	J-7
D9010	B-19	Q229	J-7
D9020	B-20	Q230	J-7
D9030	B-8	Q231	J-7
D9040	C-8	Q233	I-8
D9050	B-6	Q234	J-8
D9060	B-5	Q235	J-8
D9070	G-2	Q421	H-13
D9080	G-3	Q422	H-13
D9090	H-2	Q621	J-18
D9100	H-3	Q622	I-18
		Q623	I-17
IC201	H-7	Q624	G-8
IC202	G-7	Q625	G-8
IC203	F-8	Q651	H-21
IC321	H-11	Q701	F-6
IC601	I-15	Q702	F-6
IC602	H-16	Q1001	C-2
IC611	I-21	Q1002	C-6
Q201	I-8		

Note:

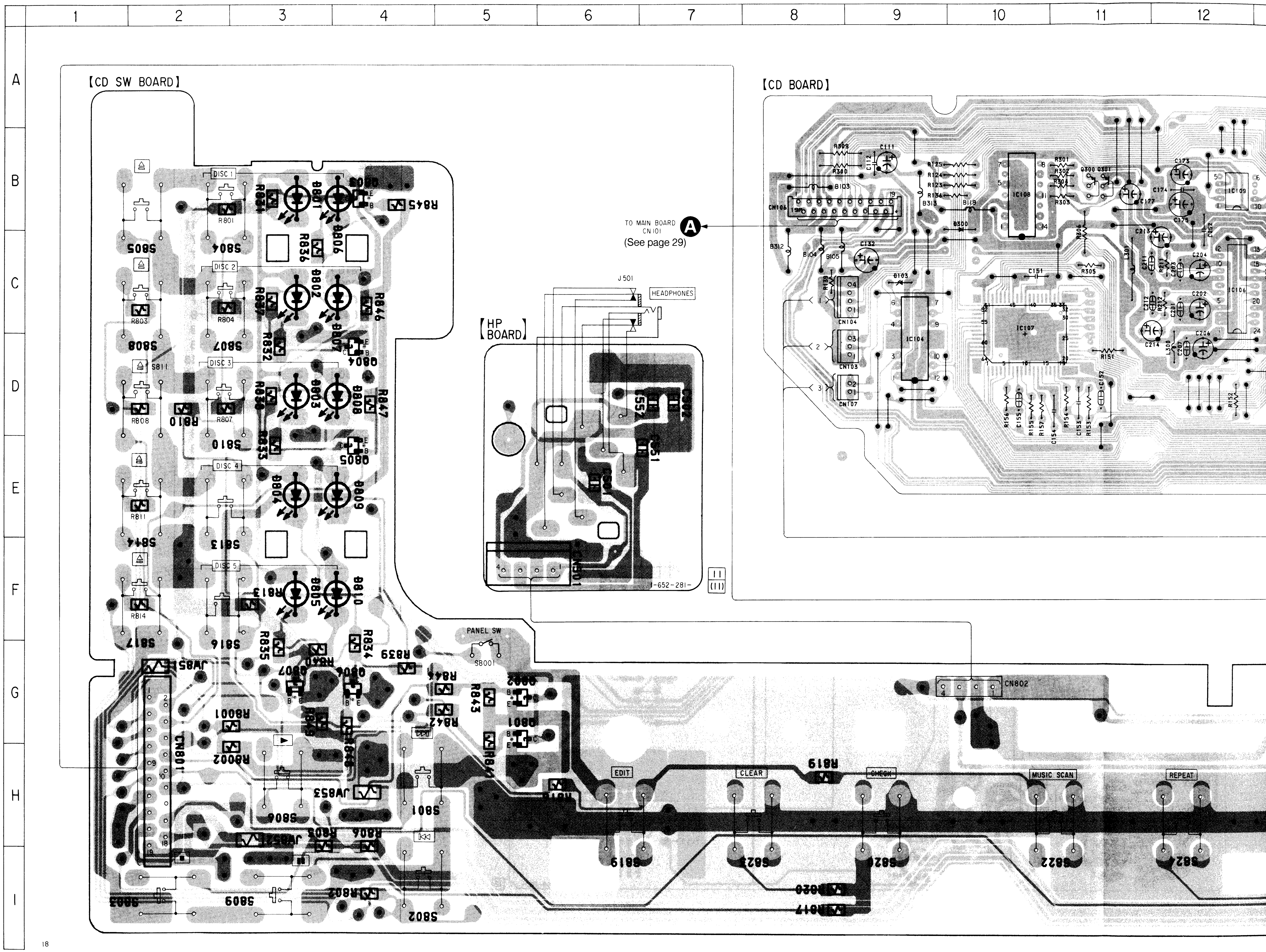
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

4-9. PRINTED WIRING BOARDS—CD Section—

- See page 25 for Circuit Boards Location.
- See page 26, 27 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D102	D - 14
D103	C - 9
D104	B - 14
D107	D - 14
D300	C - 10
D501	I - 20
D801	B - 3
D802	C - 3
D803	D - 3
D804	E - 3
D805	F - 3
D806	B - 4
D807	C - 4
D808	D - 4
D809	E - 4
D810	F - 4
IC101(A)	D - 17
IC101(B)	B - 22
IC102(A)	C - 14
IC102(B)	B - 23
IC103	B - 15
IC104	D - 9
IC106	C - 11
IC107	D - 10
IC108	B - 10
IC109	B - 12
IC501	F - 19
Q101	B - 13
Q102	E - 15
Q103	E - 14
Q501	D - 19
Q801	G - 5
Q802	G - 5
Q803	B - 4
Q804	D - 4
Q805	E - 4
Q806	G - 3
Q807	G - 4


1
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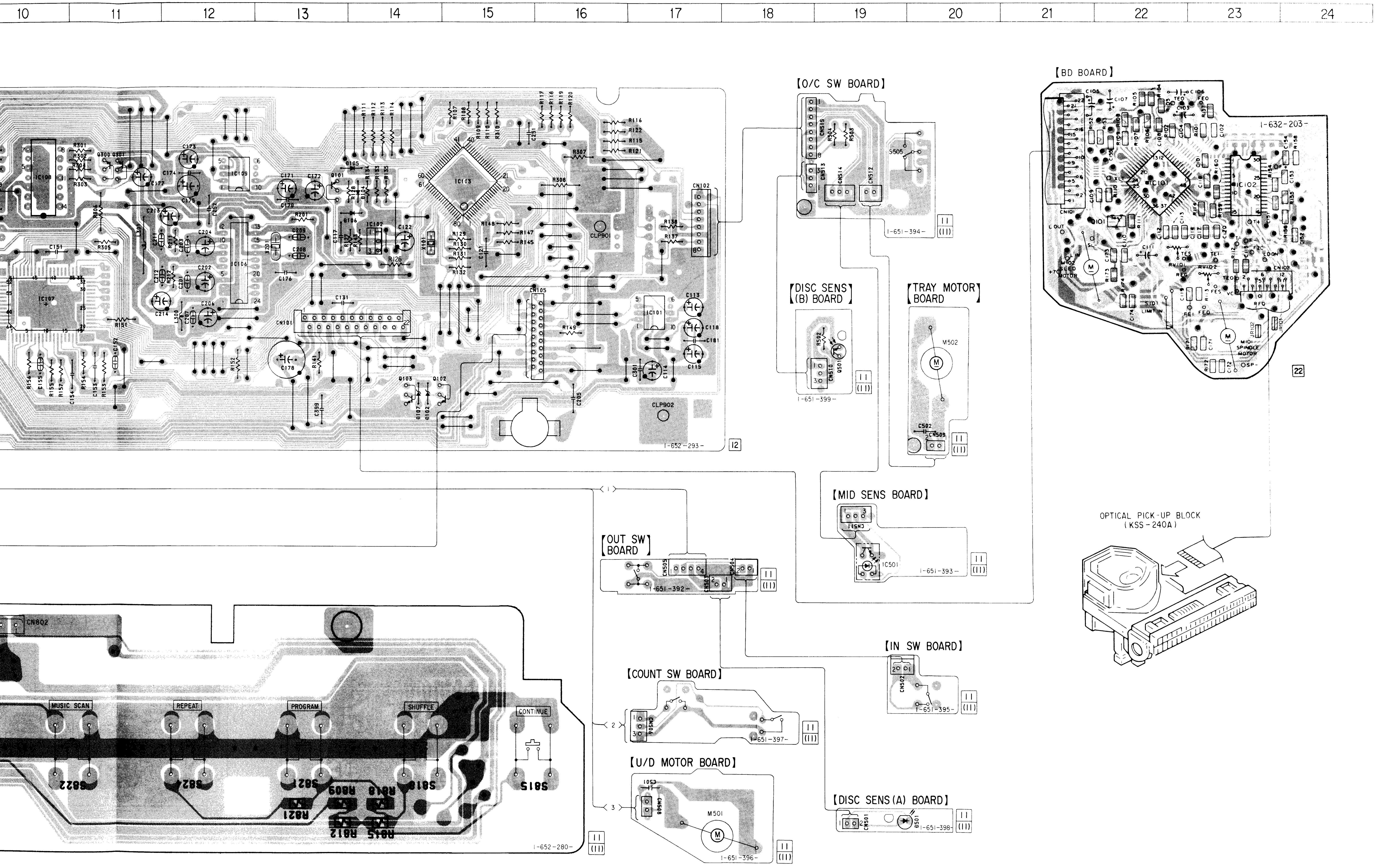
10
11
12
A
B
C
D
E
F
G
H
I
【CD SW BOARD】
【CD BOARD】
【HP BOARD】
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
R801
R803
R804
R807
R808
R811
R814
TO MAIN BOARD CN101
(See page 29)
A
J501
HEADPHONES
1-652-281-
PANEL SW
S8001
CN802
EDIT
CLEAR
CHECK
MUSIC SCAN
REPEAT
IC108
IC107
IC104
IC106
IC109
CN104
CN103
CN107
CN106
18

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ░ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.


10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
IC108
IC109
IC103
IC102
IC106
IC107
IC101
CN101
CN102
CN105
CLP901
CLP902
X101
1-652-293-
12
【O/C SW BOARD】
CN515
CN513
CN514
CN512
S505
1-651-394-
11
(11)
【DISC SENS】
【(B) BOARD】
CN510
Q501
1-651-399-
【TRAY MOTOR】
【BOARD】
M502
C502
CN509
【MID SENS BOARD】
CN511
IC501
1-651-393-
【BD BOARD】
1-632-203-
IC101
IC102
CN101
CN102
L OUT
M102
SLED
MOTOR
M101
SPINDLE
MOTOR
S101
LIMIT IN
RV101
RV102
22
OPTICAL PICK-UP BLOCK
(KSS-240A)
【OUT SW】
【BOARD】
CN505
CN503
CN504
1-651-392-
【IN SW BOARD】
CN502
1-651-395-
【COUNT SW BOARD】
CN506
1-651-397-
【U/D MOTOR BOARD】
C501
CN508
M501
1-651-396-
【DISC SENS (A) BOARD】
CN501
Q501
1-651-398-
CN802
MUSIC SCAN
REPEAT
PROGRAM
SHUFFLE
CONTINUE
S822
S821
S818
S815
R821
R809
R818
R812
R815
1-652-280-
1
2
3

Note:

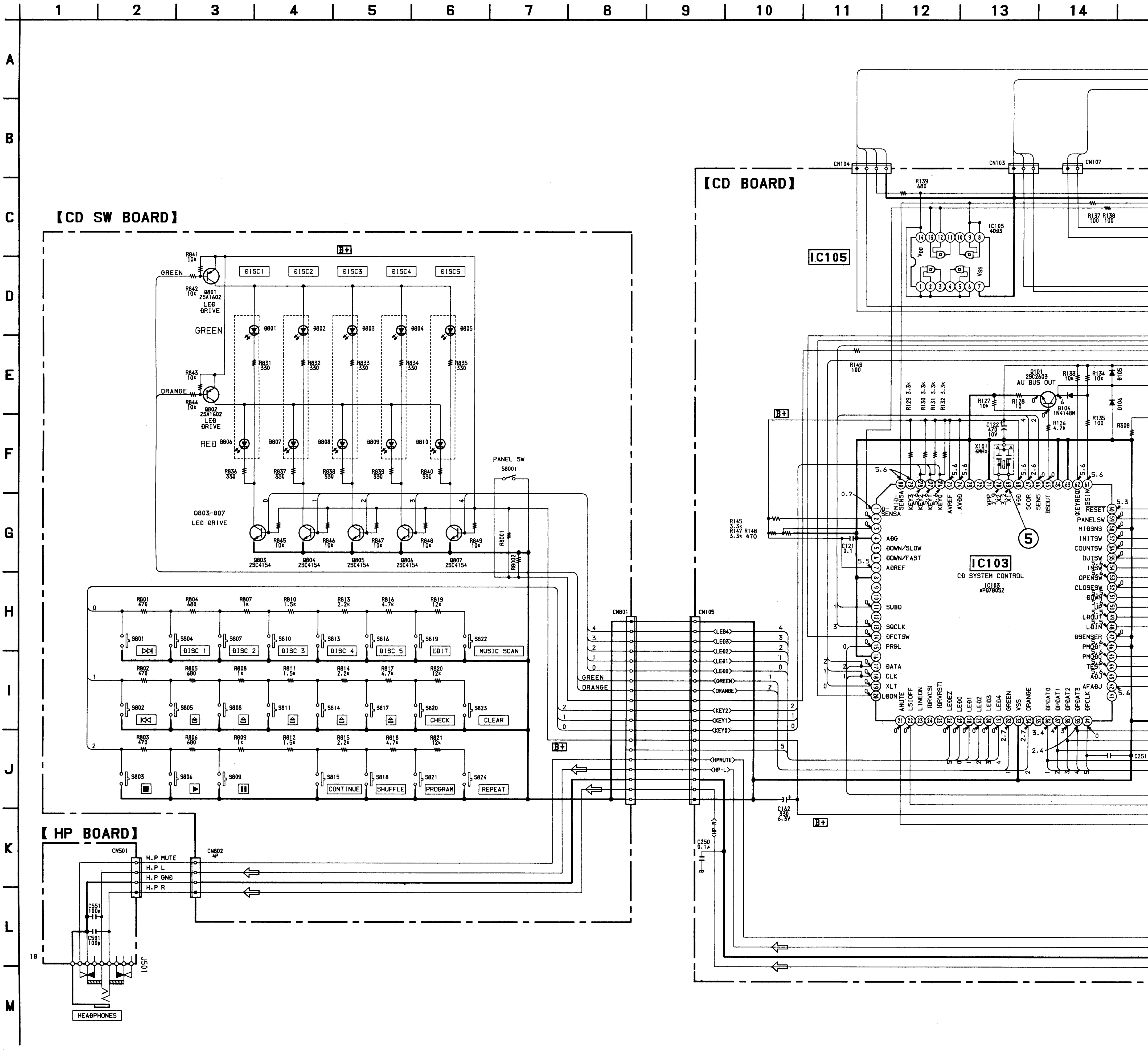
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés pa une marque ⚠ sont critique pour la sécurité. Ne les remplacer que par un pièce portant le numéro spéc fié.

- $\boxed{B+}$: B+ Line
- $\boxed{B-}$: B– Line
- $\boxed{}$: adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ➾ : CD

4-10. SCHEMATIC DIAGRAM—CD Section—

• See page 54, 55 for IC Block Diagrams and Waveforms.



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B
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D
E
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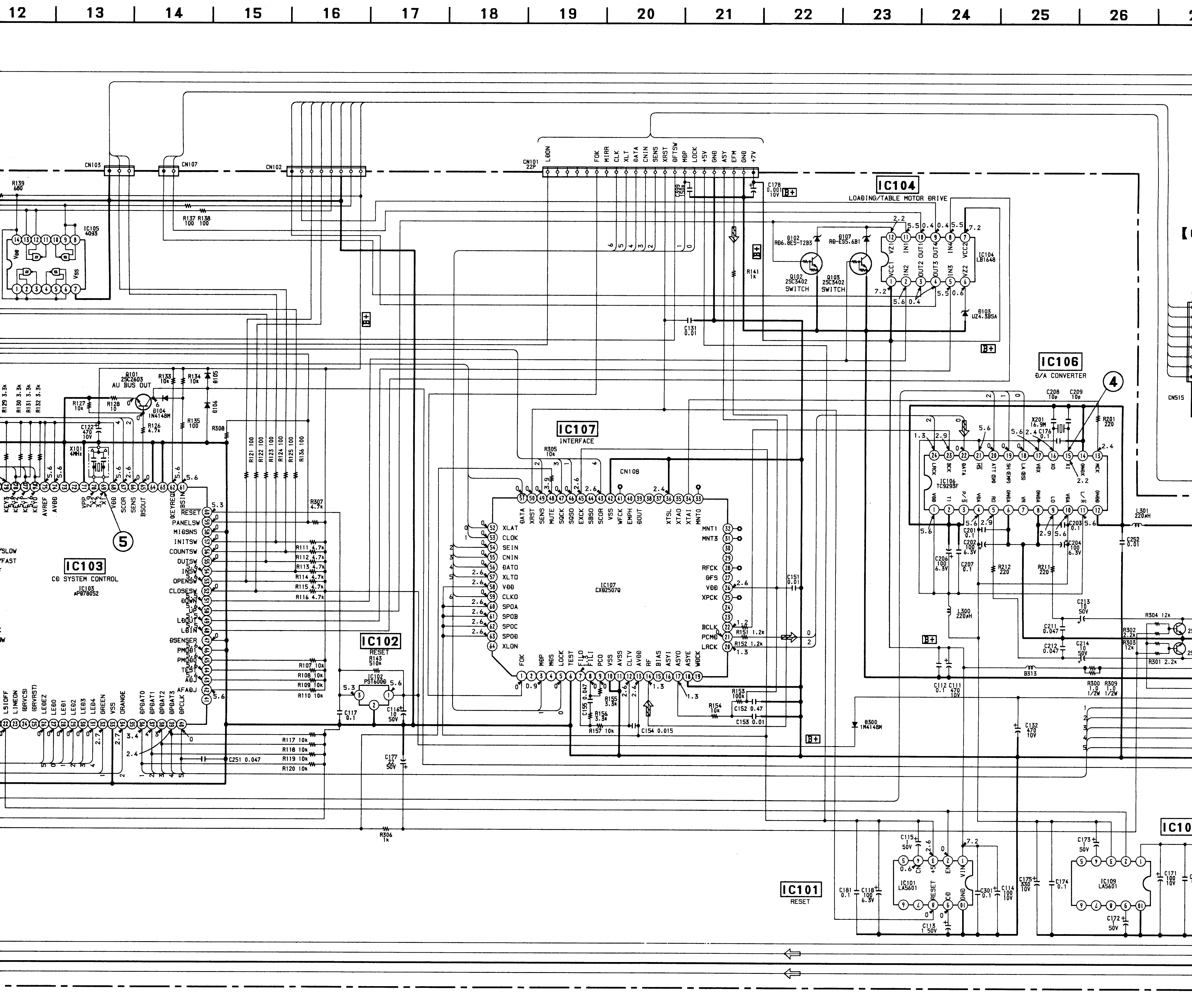
G
H
I
J
K
L
M
【CD SW BOARD】
【CD BOARD】
【HP BOARD】
IC105
IC105 4093
IC103
CD SYSTEM CONTROL
IC103 AP878052
CN104
CN103
CN107
CN105
CN801
CN802 4P
CN501
R139 680
R137 R138 100 100
R149 100
Q101 2SC2603 AU BUS OUT
D104 1N4148M
X101 4MHz
C122 470 10V
C162 330 6.3V
C250 0.1
R145 3.3k
R147 R148 3.3k 470
Q801 2SA1602 LED DRIVE
Q802 2SA1602 LED DRIVE
Q803-807 LED DRIVE
2SC4154
DISC1
DISC2
DISC3
DISC4
DISC5
GREEN
ORANGE
RED
PANEL SW
S8001
R8001
R8002
S801
S802
S803
S804
S805
S806
S807
S808
S809
S810
S811
S813
S814
S815
S816
S817
S818
S819
S820
S821
S822
S823
S824
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
EDIT
MUSIC SCAN
CHECK
CLEAR
CONTINUE
SHUFFLE
PROGRAM
REPEAT
LED4
LED3
LED2
LED1
LED0
KEY2
KEY1
KEY0
HPMUTE
HP-L
HP-R
H.P MUTE
H.P L
H.P GND
H.P R
C551 100p
C501 100p
J501
HEADPHONES
SENSA
ADG
DOWN/SLOW
DOWN/FAST
ADREF
SUBQ
SQCLK
DFCTSW
PRGL
DATA
CLK
XLT
LDON
RESET
PANELSW
MIDSNS
INITSW
COUNTSW
OUTSW
INSW
OPENSW
CLOSESW
DOWN
UP
LDOUT
LDIN
DSENSER
PMDD
TEST
ADJ
AFADJ
AMUTE
LSIOFF
LINEON
DRVCS
DRVRST
LEDEZ
LED0
LED1
LED2
LED3
LED4
GREEN
VSS
ORANGE
DPBAT0
DPBAT1
DPBAT2
DPBAT3
DPCLK
KEY3
KEY2
KEY1
KEY0
AVREF
AVDD
VDD
SCOR
SENS
BSOUT
KEYREQ
BSIN
5
5.6
5.3
0.7
C251
R308

itors are in μF unless otherwise noted. pF: μμF
less are not indicated except for electrolytics
lums.
ors are in Ω and ¼W or less unless otherwise

	Note:
nponents identi- mark ⚠ or dot- with mark ⚠ cal for safety. only with part specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

+ Line
– Line
djustment for repair.
and waveforms are dc with respect to ground
signal conditions.
CD
are taken with a VOM (Input Impedance 10MΩ).
variations may be noted due to normal produc-
ances.
ns are taken with a oscilloscope.
variations may be noted due to normal produc-
ances.
umbers refer to waveforms.
h.
M ⇨ : CD



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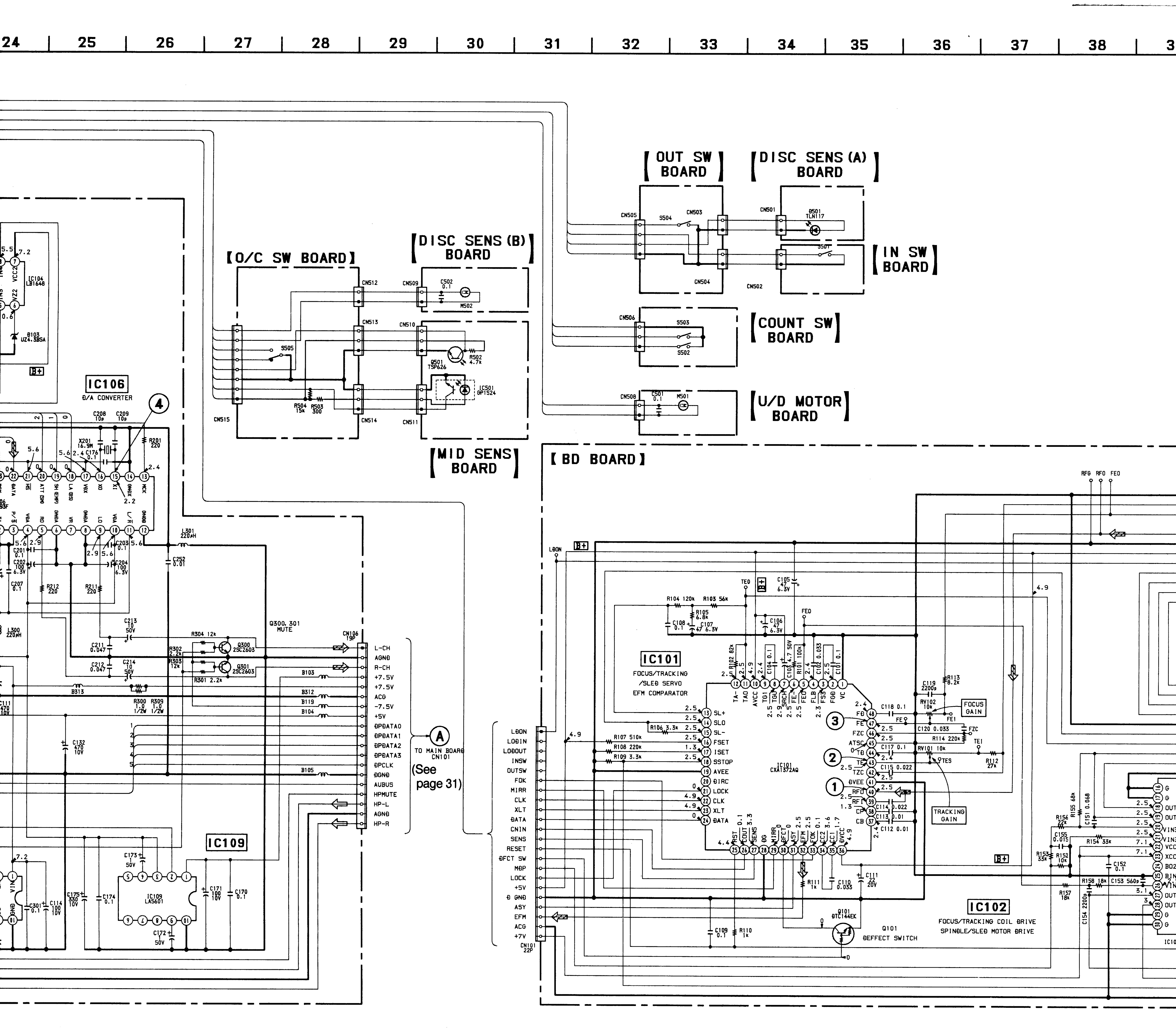
21
22
23
24
25
26
CN103
CN107
CN102
CN101 22P
IC104
LOADING/TABLE MOTOR DRIVE
IC104 LB1648
Q102 2SC3402 SWITCH
Q103 2SC3402 SWITCH
IC105 4093
IC106
D/A CONVERTER
IC106 TC9293F
④
IC107
INTERFACE
IC107 CX82507Q
CN108
IC103
CD SYSTEM CONTROL
IC103 MP878052
⑤
Q101 2SC2603 AU BUS OUT
IC102
RESET
IC102 PST600D
IC101
RESET
IC101 LA5601
IC109 LA5601
CN515
B+


24
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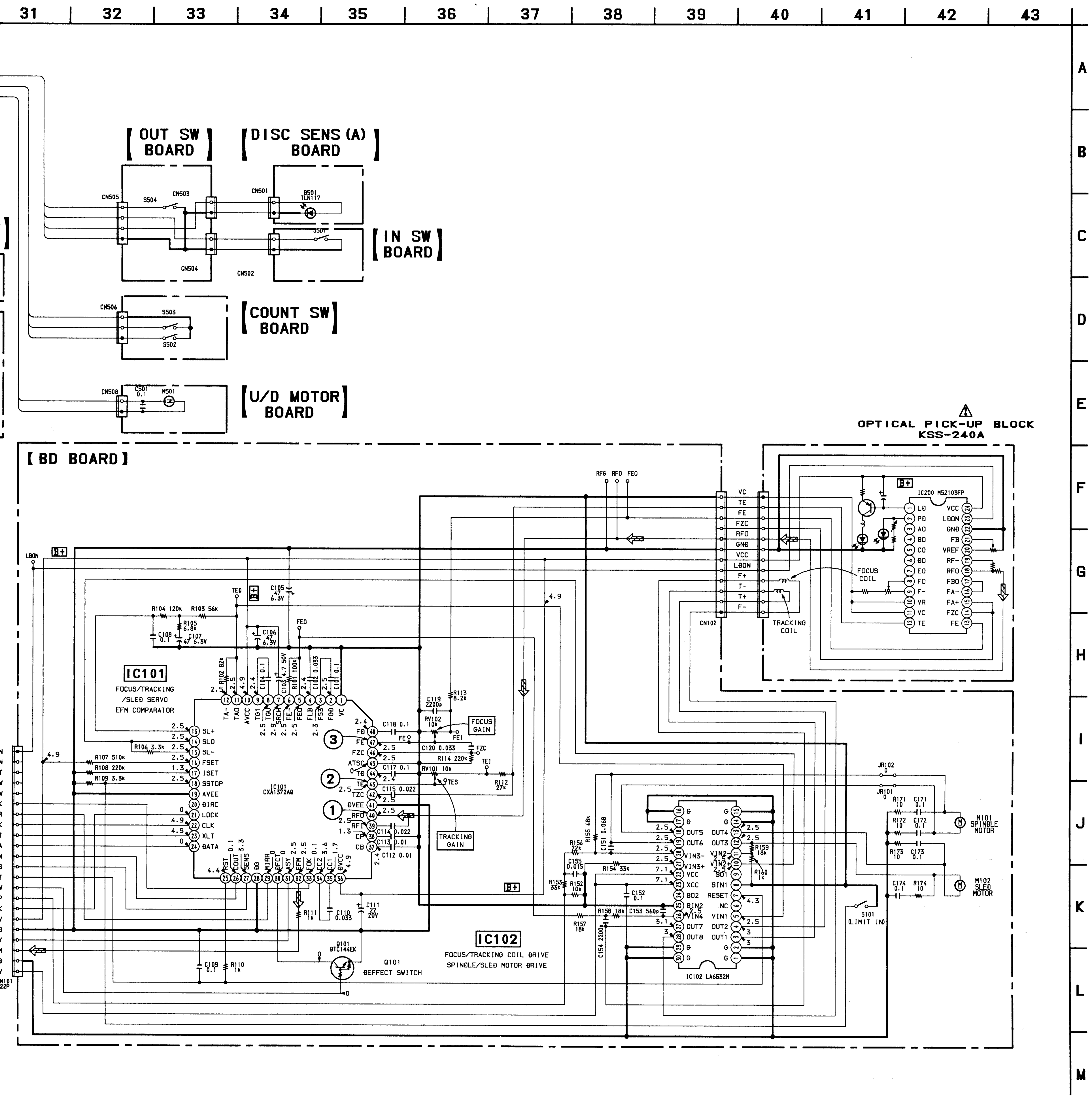
36
37
38
[O/C SW BOARD]
[DISC SENS (B) BOARD]
[MID SENS BOARD]
[OUT SW BOARD]
[DISC SENS (A) BOARD]
[IN SW BOARD]
[COUNT SW BOARD]
[U/D MOTOR BOARD]
[BD BOARD]
IC106
D/A CONVERTER
IC109
IC101
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
CXA1372AQ
IC102
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
Q300, 301 MUTE
Q101 DEFFECT SWITCH
FOCUS GAIN
TRACKING GAIN
TO MAIN BOARD CN101
(See page 31)
A
1
2
3
4
L-CH
AGND
R-CH
+7.5V
+7.5V
ACG
-7.5V
+5V
DPDATA0
DPDATA1
DPDATA2
DPDATA3
DPCLK
DGND
AUBUS
HPMUTE
HP-L
AGND
HP-R
LDON
LODIN
LODOUT
INSW
OUTSW
FOK
MIRR
CLK
XLT
DATA
CNIN
SENS
RESET
DFCT SW
MDP
LOCK
+5V
D GND
ASY
EFM
ACG
+7V
CN101 22P


31
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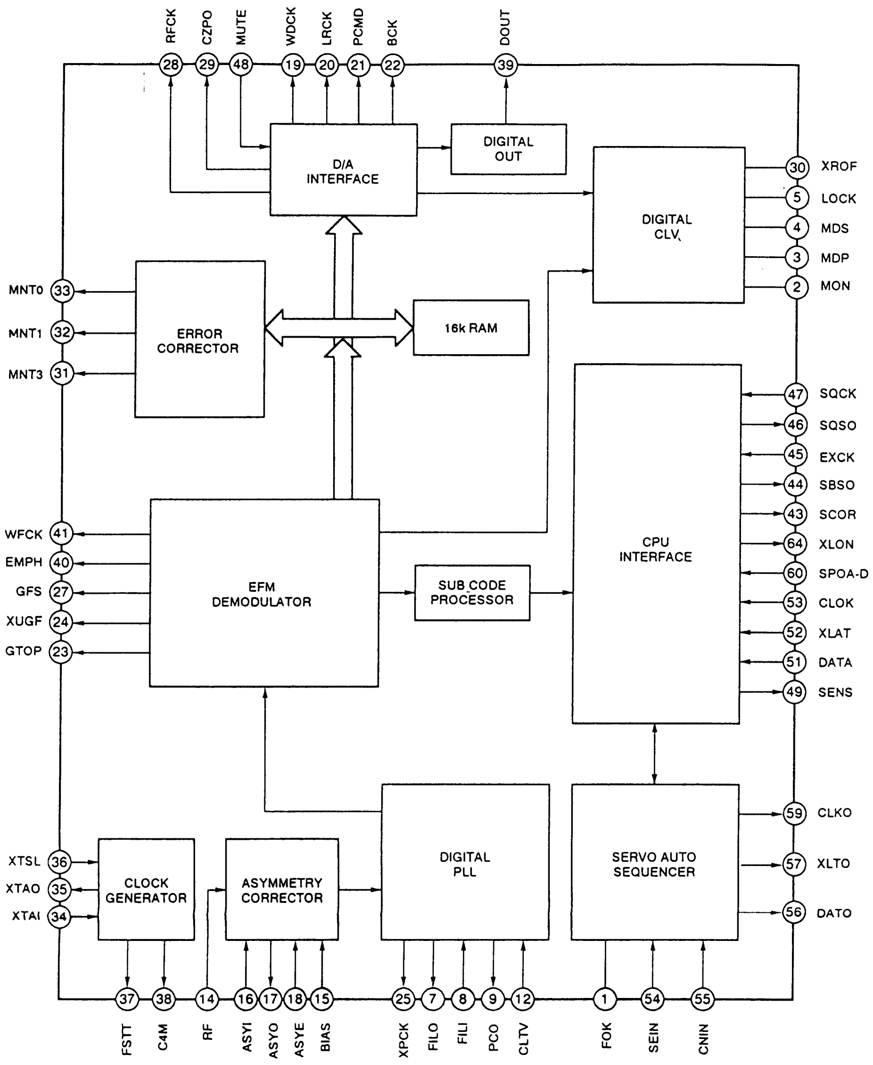
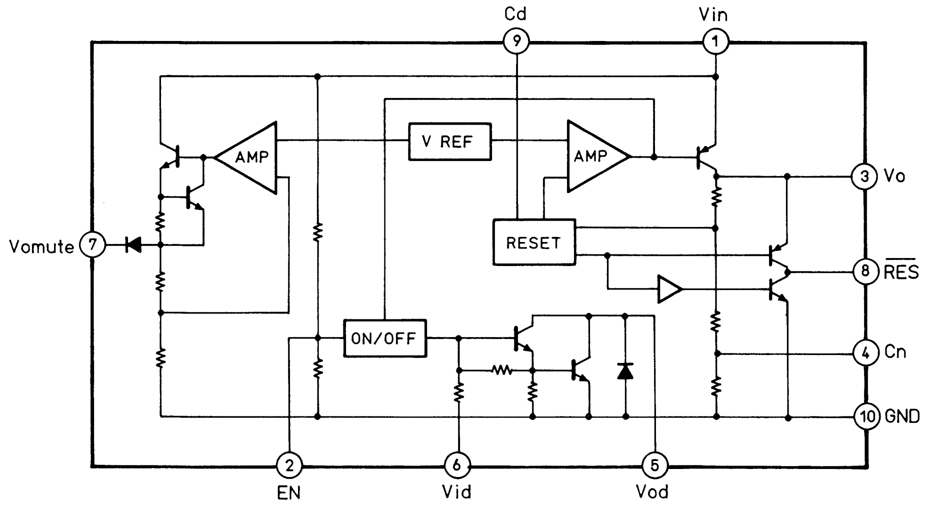
41
42
43
A
B
C
D
E
F
G
H
I
J
K
L
M
OUT SW BOARD
DISC SENS (A) BOARD
IN SW BOARD
COUNT SW BOARD
U/D MOTOR BOARD
BD BOARD
OPTICAL PICK-UP BLOCK KSS-240A
CN505
S504
CN503
CN501
D501 TLN117
S501
CN504
CN502
CN506
S503
S502
CN508
C501 0.1
M501
IC101
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
IC101 CXA1372AQ
IC102
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
IC102 LA6532M
IC200 M52103FP
Q101 DTC144EK
Q101 DEFFECT SWITCH
FOCUS GAIN
TRACKING GAIN
RV102 10k
RV101 10k
FOCUS COIL
TRACKING COIL
CN102
S101 LIMIT IN
M101 SPINDLE MOTOR
M102 SLED MOTOR
JR101
JR102
RFG RFO FEO
LDON
B+
VC
TE
FE
FZC
RFO
GND
VCC
LDON
F+
T-
T+
F-
LD
PD
AD
BD
CD
DD
ED
FD
F-
VR
VC
TE
VCC
LDON
GND
FB
VREF
RF-
RFO
FBO
FA-
FA+
FZC
FE
SL+
SLO
SL-
FSET
ISET
SSTOP
AVEE
DIRC
LOCK
CLK
XLT
DATA
FD
FE
FZC
ATSC
TD
TE
TZC
DVEE
RFI
CP
CB
TA-
TAO
AVCC
TGI
TGU
SRCH
FE-
FEO
FLB
FS3
FGD
VC
MST
COUT
SENS
DG
MIRR
DFCT
ASY
EFM
CDK
CC2
CC1
DVCC
OUT5
OUT6
VIN3-
VIN3+
VCC
BO2
XCC
BIN2
VIN4
OUT7
OUT8
OUT4
OUT3
VIN2
VIN2
BO1
BIN1
RESET
NC
VIN1
OUT2
OUT1
G
1
2
3
4.9
2.5
1.3
0
4.4
2.4
2.9
7.1
5.1
4.3
R104 120k
R103 56k
R105 6.8k
C108 0.1
C107 47 6.3V
C105 47 6.3V
C106 47 6.3V
R102 82k
R101 100k
C104 0.1
C103 0.033
C102 4.7 50V
C101 0.1
R106 3.3k
R107 510k
R108 220k
R109 3.3k
R113 8.2k
C119 2200p
C118 0.1
C120 0.033
R114 220k
C117 0.1
C115 0.022
C114 0.022
C113 0.01
C112 0.01
R112 27k
C111 22 20V
C110 0.033
R111 1k
C109 0.1
R110 1k
R155 68k
C151 0.068
R156 27k
C156 0.015
R154 33k
R153 33k
R152 10k
C152 0.1
R158 18k
C153 560p
R157 18k
C154 2200p
R159 16k
R160 1k
R171 10
C171 0.1
R172 10
C172 0.1
R173 10
C173 0.1
C174 0.1
R174 10
TEO
FEO
FEI
TEI
TES

• IC Block Diagrams

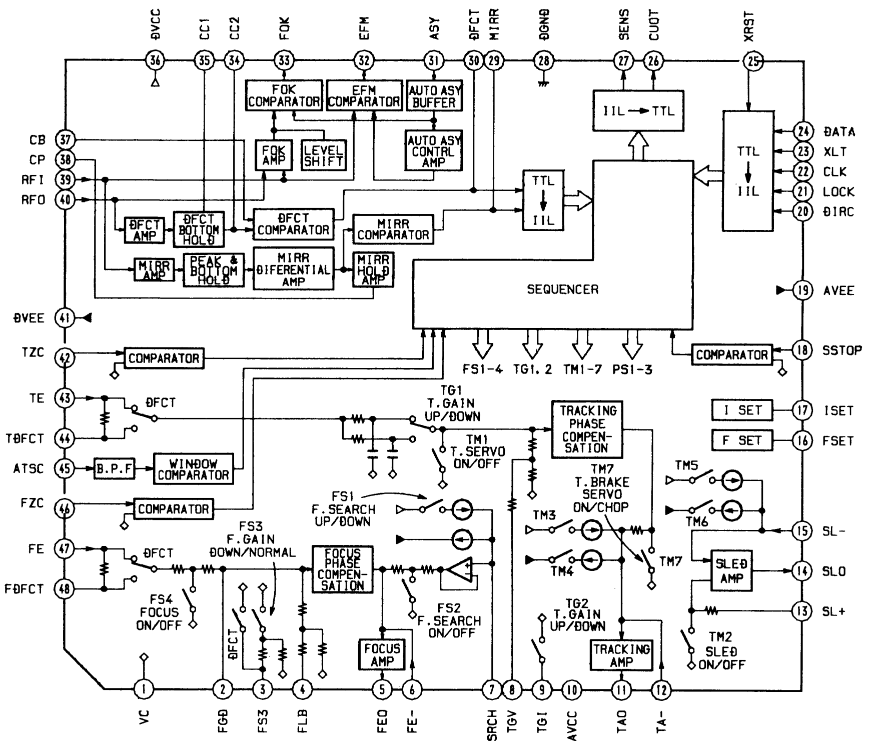
IC107 CXD2517Q


RFCK
CZPO
MUTE
WDCK
LRCK
PCMD
BCK
DOUT
D/A INTERFACE
DIGITAL OUT
DIGITAL CLV.
XROF
LOCK
MDS
MDP
MON
MNT0
MNT1
MNT3
ERROR CORRECTOR
16k RAM
SQCK
SQSO
EXCK
SBSO
SCOR
XLON
SPOA-D
CLOK
XLAT
DATA
SENS
CPU INTERFACE
WFCK
EMPH
GFS
XUGF
GTOP
EFM DEMODULATOR
SUB CODE PROCESSOR
XTSL
XTAO
XTAI
CLOCK GENERATOR
ASYMMETRY CORRECTOR
DIGITAL PLL
SERVO AUTO SEQUENCER
CLKO
XLTO
DATO
FSTT
C4M
RF
ASYI
ASYO
ASYE
BIAS
XPCK
FILO
FILI
PCO
CLTV
FOK
SEIN
CNIN

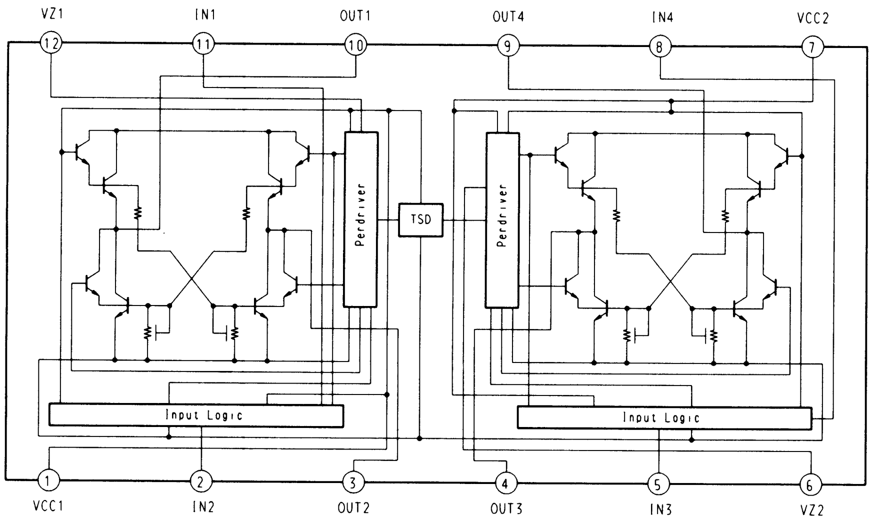
IC101, 109 LA5601


Cd
Vin
AMP
V REF
AMP
Vo
Vomute
RESET
RES
ON/OFF
Cn
GND
EN
Vid
Vod

IC101 CXA1372AQ

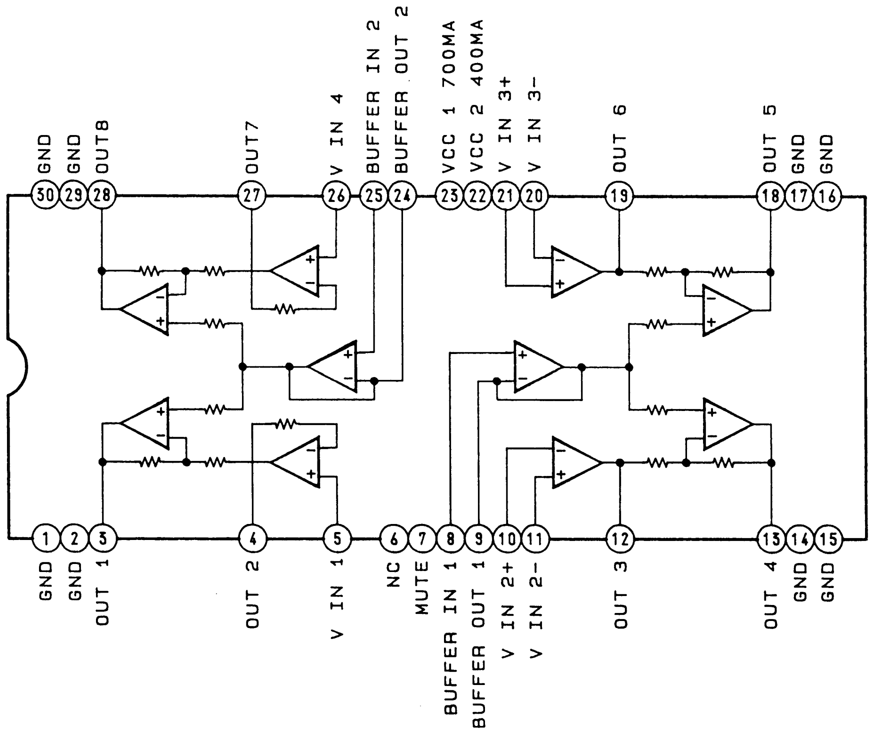

ϑVCC
CC1
CC2
FOK
EFM
ASY
ϑFCT
MIRR
ϑGNϑ
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
IIL → TTL
CB
CP
RFI
RFO
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
TTL ↓ IIL
DATA
XLT
CLK
LOCK
ϑIRC
ϑFCT AMP
ϑFCT BOTTOM HOLϑ
ϑFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLϑ
MIRR ϑIFERENTIAL AMP
MIRR HOLϑ AMP
SEQUENCER
AVEE
ϑVEE
TZC
COMPARATOR
FS1-4
TG1, 2
TM1-7
PS1-3
COMPARATOR
SSTOP
TE
ϑFCT
TG1 T.GAIN UP/ϑOWN
TRACKING PHASE COMPEN-SATION
I SET
ISET
TϑFCT
TM1 T.SERVO ON/OFF
F SET
FSET
ATSC
B.P.F
WINϑOW COMPARATOR
TM7 T.BRAKE SERVO ON/CHOP
TM5
FZC
COMPARATOR
FS1 F.SEARCH UP/ϑOWN
TM6
TM3
SL-
FE
ϑFCT
FS3 F.GAIN ϑOWN/NORMAL
FOCUS PHASE COMPEN-SATION
TM4
TM7
SLEϑ AMP
SLO
FϑFCT
FS4 FOCUS ON/OFF
FS2 F.SEARCH ON/OFF
TG2 T.GAIN UP/ϑOWN
SL+
ϑFCT
FOCUS AMP
TRACKING AMP
TM2 SLEϑ ON/OFF
VC
FGϑ
FS3
FLB
FEO
FE-
SRCH
TGV
TGI
AVCC
TAO
TA-

IC104 LB1648

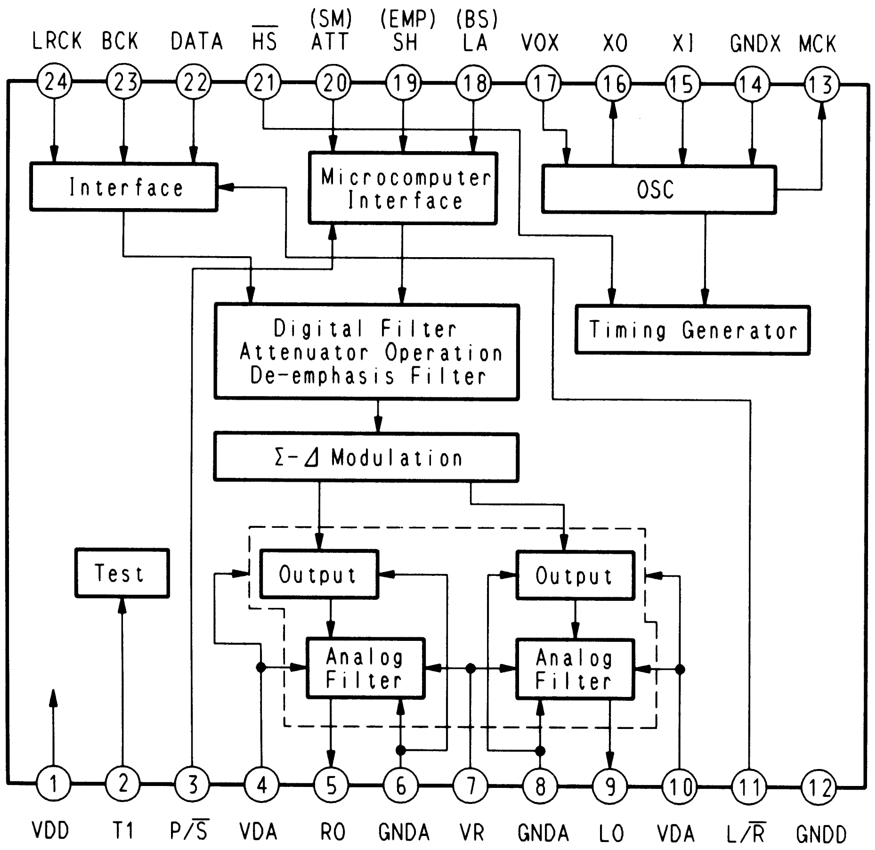

VZ1
IN1
OUT1
OUT4
IN4
VCC2
Perdriver
TSD
Perdriver
Input Logic
Input Logic
VCC1
IN2
OUT2
OUT3
IN3
VZ2

MODE	IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
OPEN	0	0	OPEN	OPEN	0	0	OPEN	OPEN
FORWARD	1	0	H	L	1	0	H	L
REVERSE	0	1	L	H	0	1	L	H
BRAKE	1	1	L	L	1	1	L	L

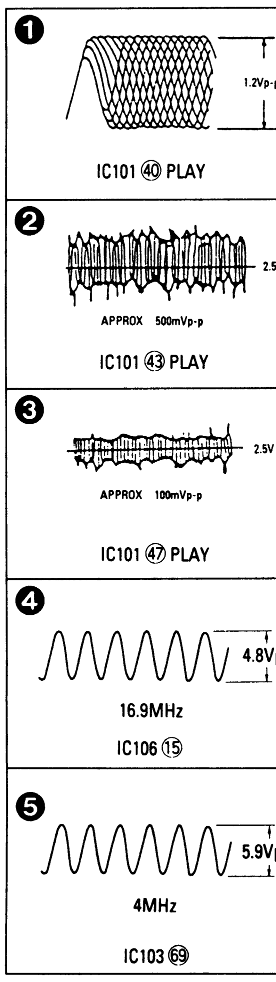
IC102 LA6532M


GND
GND
OUT8
OUT7
V IN 4
BUFFER IN 2
BUFFER OUT 2
VCC 1 700MA
VCC 2 400MA
V IN 3+
V IN 3-
OUT 6
OUT 5
GND
GND
GND
GND
OUT 1
OUT 2
V IN 1
NC
MUTE
BUFFER IN 1
BUFFER OUT 1
V IN 2+
V IN 2-
OUT 3
OUT 4
GND
GND

IC106 TC9293N

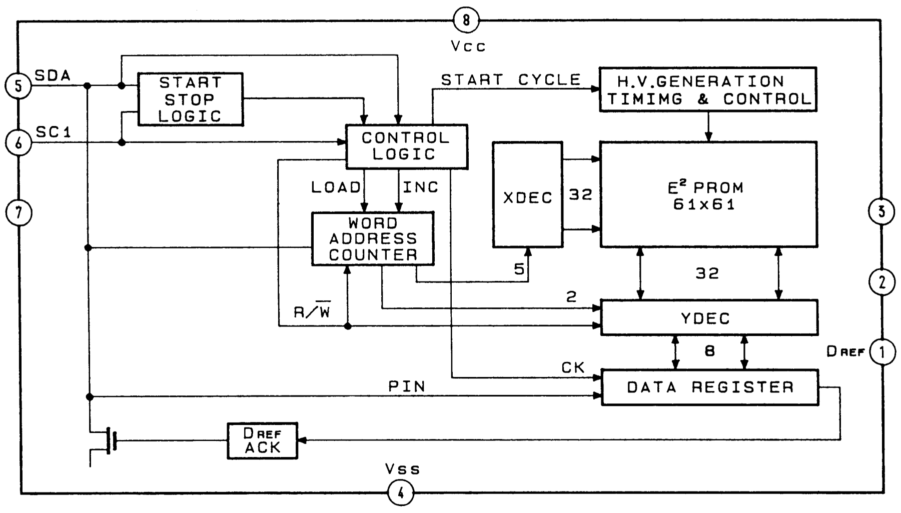

LRCK
BCK
DATA
HS
(SM) ATT
(EMP) SH
(BS) LA
VOX
XO
XI
GNDX
MCK
Interface
Microcomputer Interface
OSC
Digital Filter
Attenuator Operation
De-emphasis Filter
Timing Generator
Σ-Δ Modulation
Test
Output
Output
Analog Filter
Analog Filter
VDD
T1
P/S
VDA
RO
GNDA
VR
GNDA
LO
VDA
L/R
GNDD

• Waveform



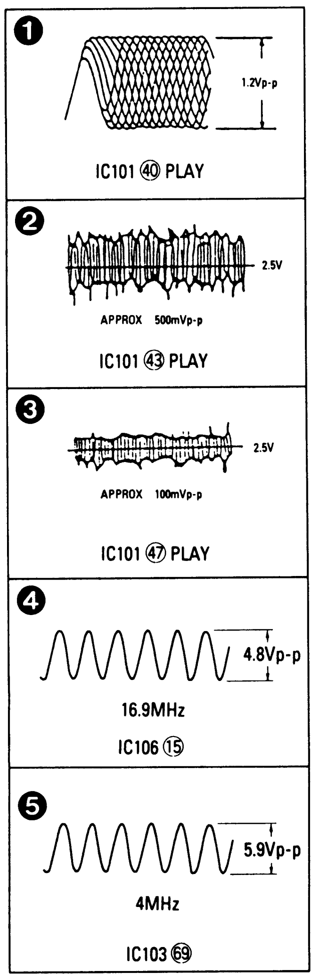
- **IC Block Diagram**

IC902 X24C01S

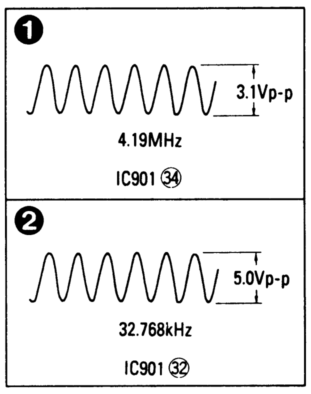


8
Vcc
5 SDA
6 SC1
7
START STOP LOGIC
START CYCLE
H.V.GENERATION TIMIMG & CONTROL
CONTROL LOGIC
LOAD
INC
WORD ADDRESS COUNTER
XDEC
32
E² PROM 61x61
5
32
2
R/W
YDEC
8
CK
DATA REGISTER
PIN
DREF ACK
DREF 1
3
2
Vss
4

- **Waveform**



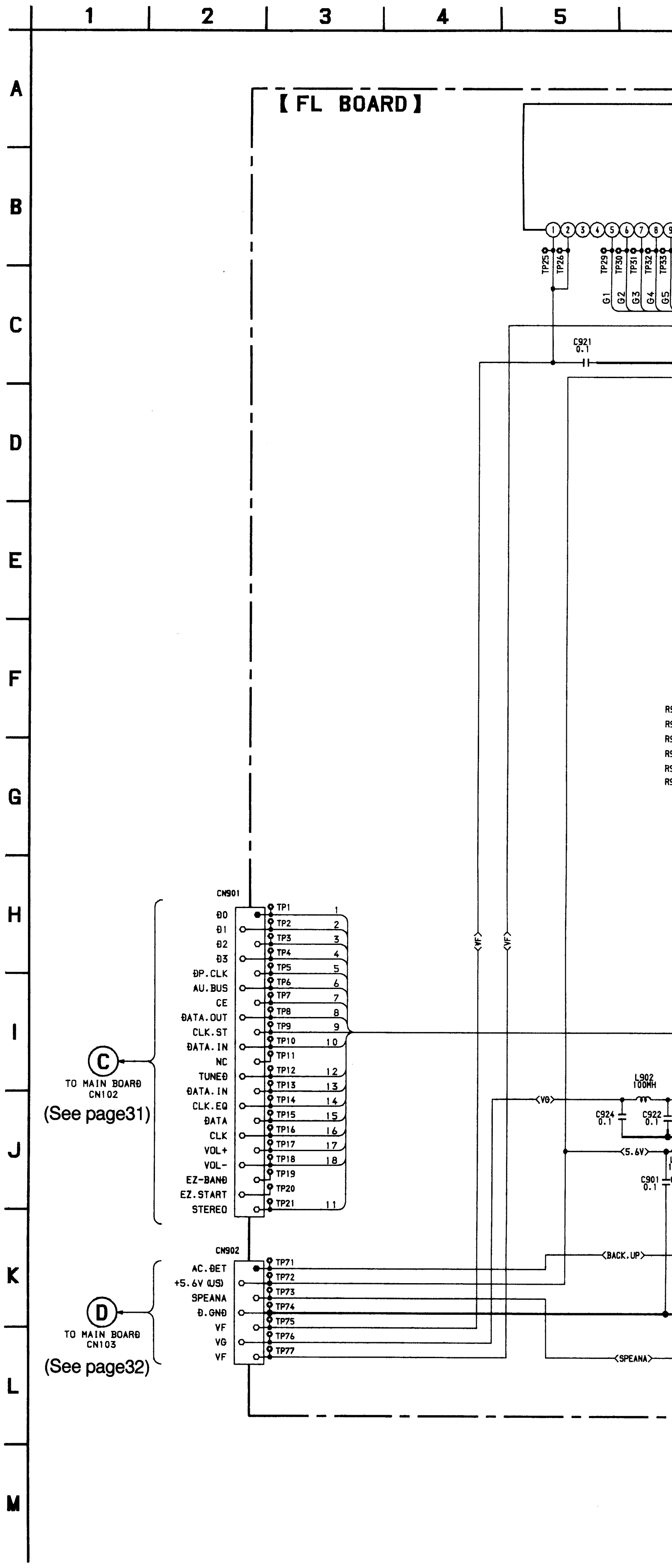
- **Waveform**



Note:

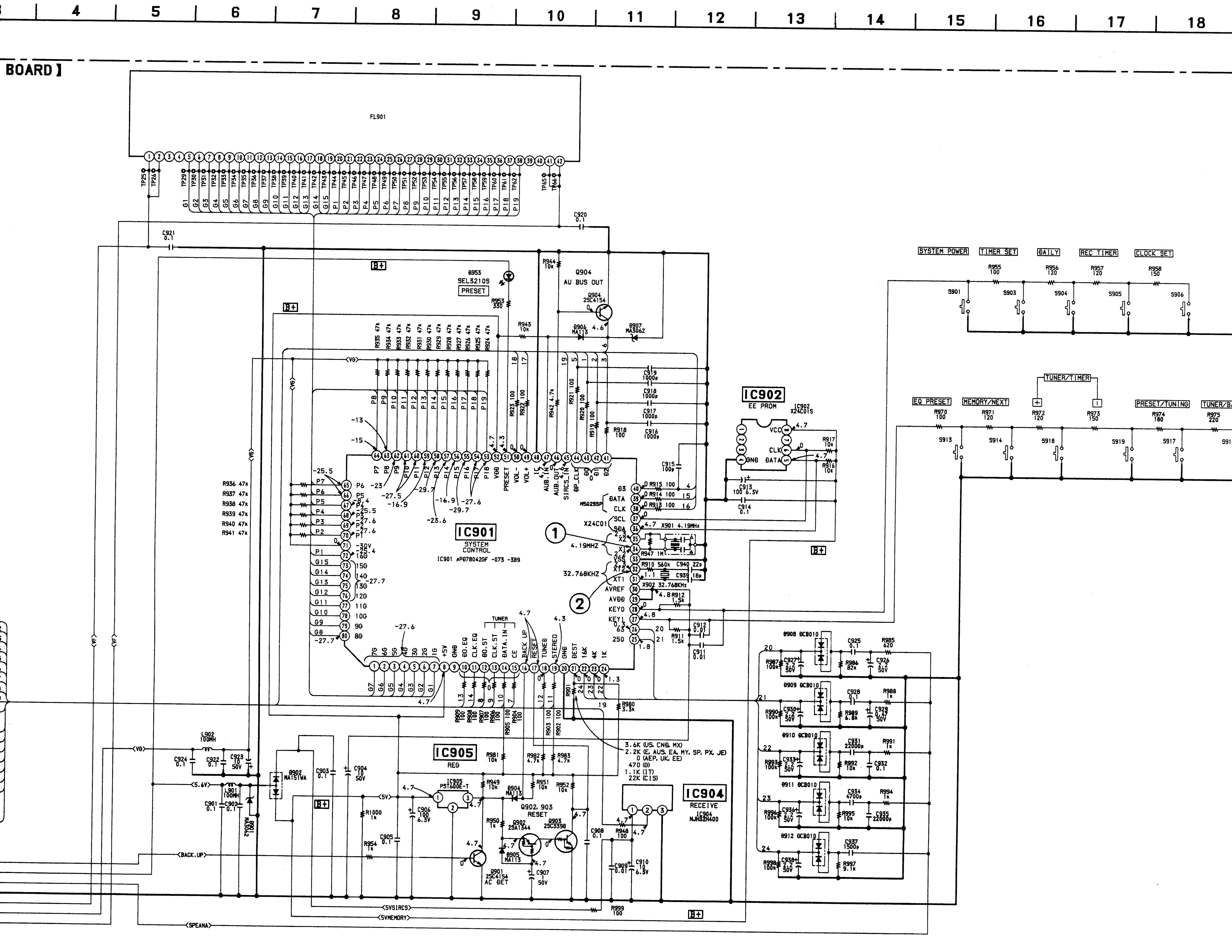
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- B+ : B+ Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

4-11. SCHEMATIC DIAGRAM—PANEL Section—

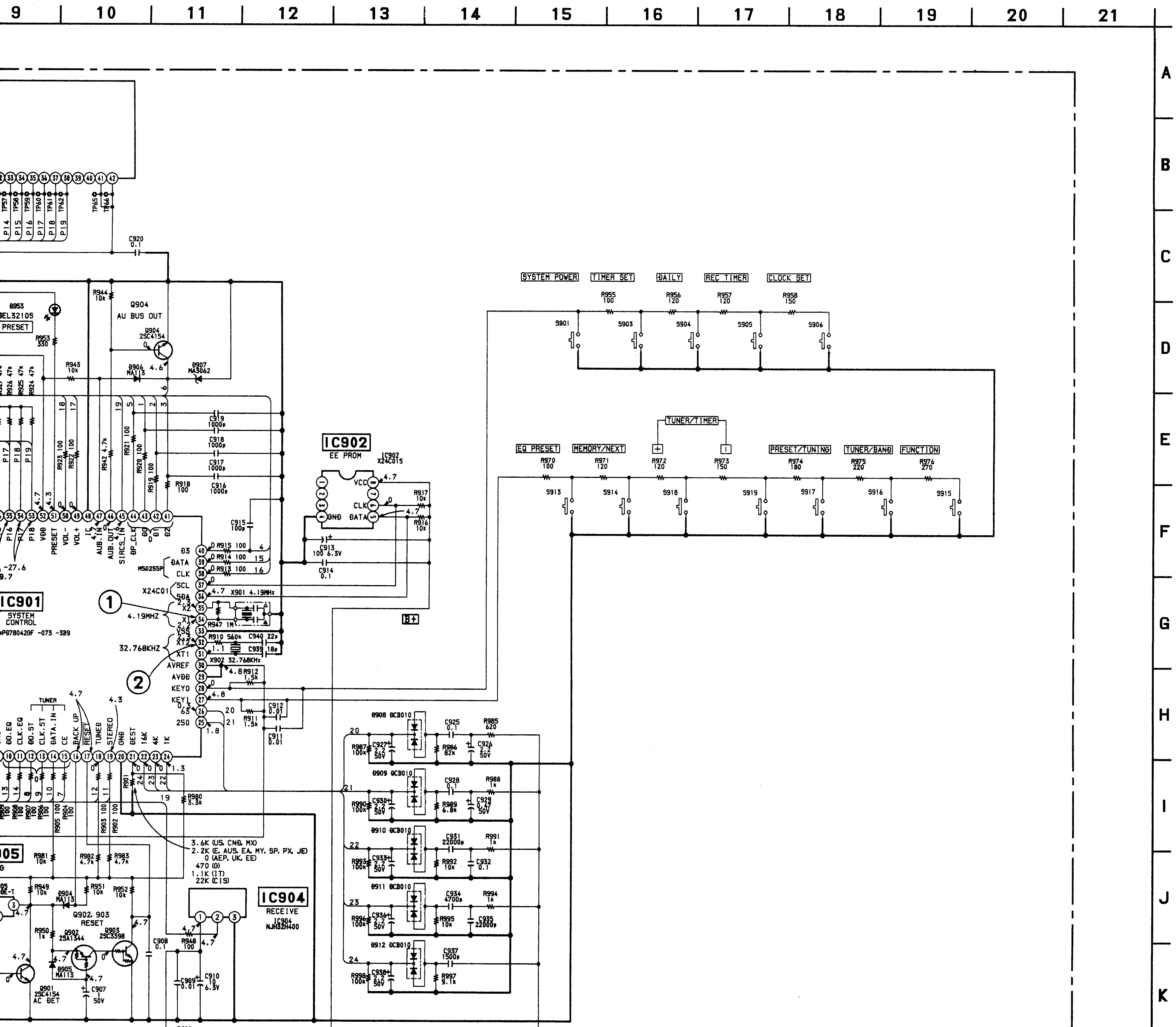


1
2
3
4
5
A
B
C
D
E
F
G
H
I
J
K
L
M
[FL BOARD]
1 2 3 4 5 6 7 8
TP25
TP26
TP29
TP30
TP31
TP32
TP33
G1
G2
G3
G4
G5
C921 0.1
CN901
D0
D1
D2
D3
DP.CLK
AU.BUS
CE
DATA.OUT
CLK.ST
DATA.IN
NC
TUNED
DATA.IN
CLK.EQ
DATA
CLK
VOL+
VOL-
EZ-BAND
EZ.START
STEREO
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
C
TO MAIN BOARD CN102
(See page31)
CN902
AC.DET
+5.6V (US)
SPEANA
D.GND
VF
VG
VF
TP71
TP72
TP73
TP74
TP75
TP76
TP77
D
TO MAIN BOARD CN103
(See page32)
<VF>
<VF>
<VG>
L902 100MH
C924 0.1
C922 0.1
<5.6V>
C901 0.1
<BACK.UP>
<SPEANA>

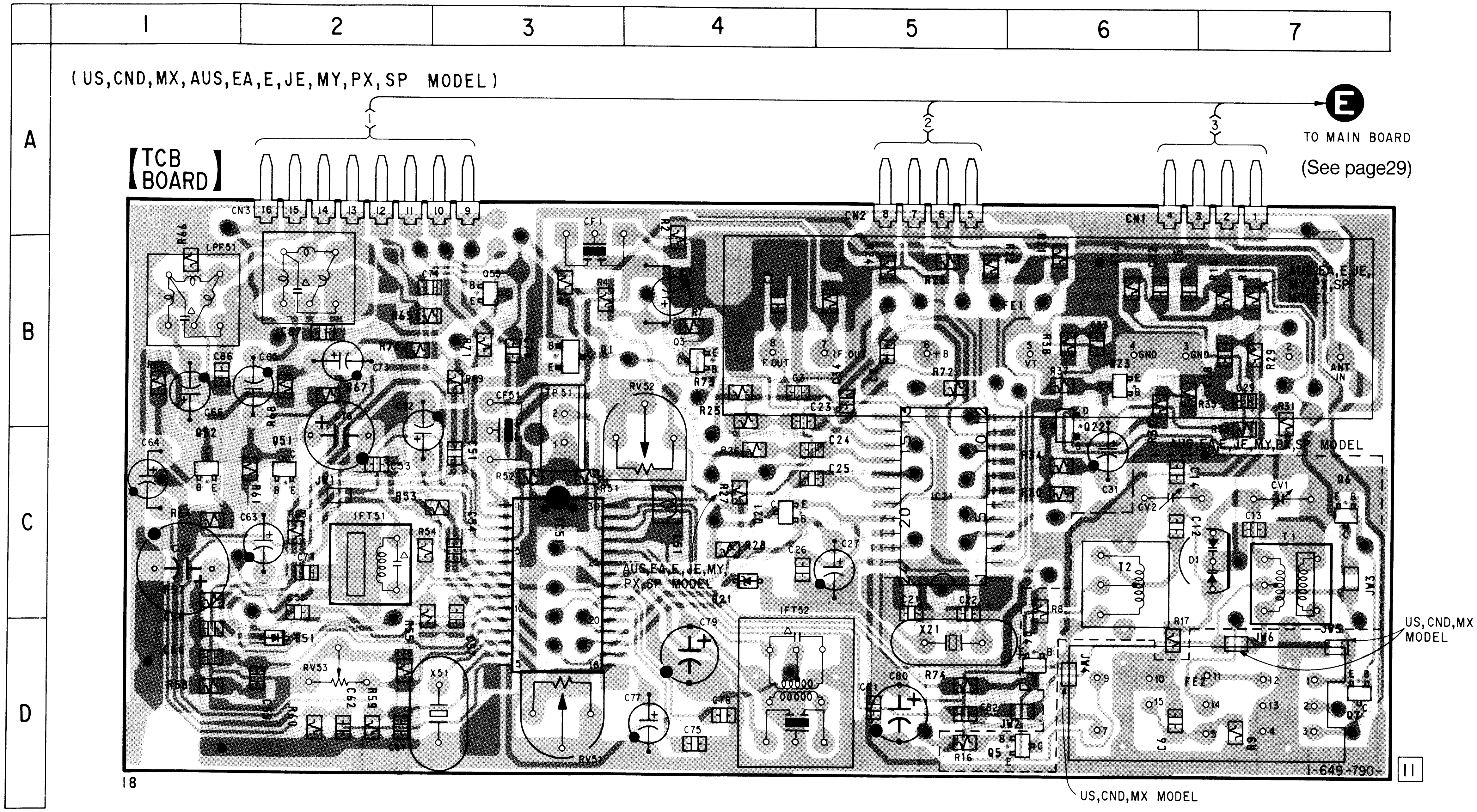
-PANEL Section—



3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
BOARD]
FL901
IC901
SYSTEM CONTROL
IC901 µPD78042GF -073 -3B9
IC902
EE PROM
IC902 X24C01S
IC904
RECEIVE
IC904 NJL63H400
IC905
REG
IC905 PST600E-T
Q904
AU BUS OUT
Q904 2SC4154
Q902, 903
RESET
Q902 2SA1344
Q903 2SC5398
Q901 2SC4154
AC DET
D953
SEL3210S
PRESET
X901 4.19MHz
X902 32.768KHz
4.19MHZ
32.768KHZ
①
②
SYSTEM POWER
TIMER SET
DAILY
REC TIMER
CLOCK SET
TUNER/TIMER
EQ PRESET
MEMORY/NEXT
PRESET/TUNING
TUNER/BA
S901
S903
S904
S905
S906
S913
S914
S918
S919
S917
L902 100MH
L901 100MH
D902 MA151WA
D908 DCB010
D909 DCB010
D910 DCB010
D911 DCB010
D912 DCB010
3.6K (US, CND, MX)
2.2K (E, AUS, EA, MY, SP, PX, JE)
0 (AEP, UK, EE)
470 (G)
1.1K (IT)
22K (CIS)
B+
<VG>
<VF>
<5.6V>
<5V>
<BACK.UP>
<SVSIRCS>
<SVMEMORY>
<SPEANA>


9
10
11
12
13
14
15
16
17
18
19
20
21
A
B
C
D
E
F
G
H
I
J
K
L
M
IC901
SYSTEM CONTROL
IC902
EE PROM
IC902 X24C01S
IC904
RECEIVE
IC904 NJM32H400
Q904
AU BUS OUT
Q904 2SC4154
D907 MA3062
D904 MA113
Q902, 903
RESET
Q902 2SA1344
Q903 2SC3398
Q901 2SC4154
AC DET
D905 MA113
X901 4.19MHz
X902 32.768KHz
4.19MHZ
32.768KHZ
SYSTEM POWER
TIMER SET
DAILY
REC TIMER
CLOCK SET
R955 100
R956 120
R957 120
R958 150
S901
S903
S904
S905
S906
TUNER/TIMER
EQ PRESET
MEMORY/NEXT
+
−
PRESET/TUNING
TUNER/BAND
FUNCTION
R970 100
R971 120
R972 120
R973 150
R974 180
R975 220
R976 270
S913
S914
S918
S919
S917
S916
S915
D908 BCB010
D909 BCB010
D910 BCB010
D911 BCB010
D912 BCB010
3.6K (US, CND, MX)
2.2K (E, AUS, EA, MY, SP, PX, JE)
0 (AEP, UK, EE)
470 (D)
1.1K (IT)
22K (CIS)
B+
①
②

4-14. PRINTED WIRING BOARD—TUNER Section— (US, CND, MX, AUS, EA, E, JE, MY, PX, SP Model) • See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
A
B
C
D
(US,CND,MX,AUS,EA,E,JE,MY,PX,SP MODEL)
TCB BOARD
E
TO MAIN BOARD
(See page29)
CN3
CN2
CN1
IC51
IC21
IFT51
IFT52
RV51
RV52
RV53
X21
X51
AUS,EA,E,JE,MY,PX,SP MODEL
US,CND,MX MODEL
1-649-790-11
18

• Semiconductor Location

Ref. No.	Location
D1	C-7
D21	C-4
D51	D-2
IC21	C-5
IC51	C-3
Q1	B-3
Q3	B-3
Q4	D-6
Q5	D-6
Q6	C-7
Q7	D-7
Q21	C-4
Q22	B-6
Q23	B-6
Q51	C-2
Q52	C-1
Q53	B-3

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- Pattern of the rear side
- △ : internal component

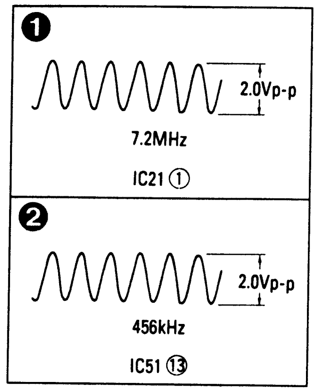
• Abbreviations

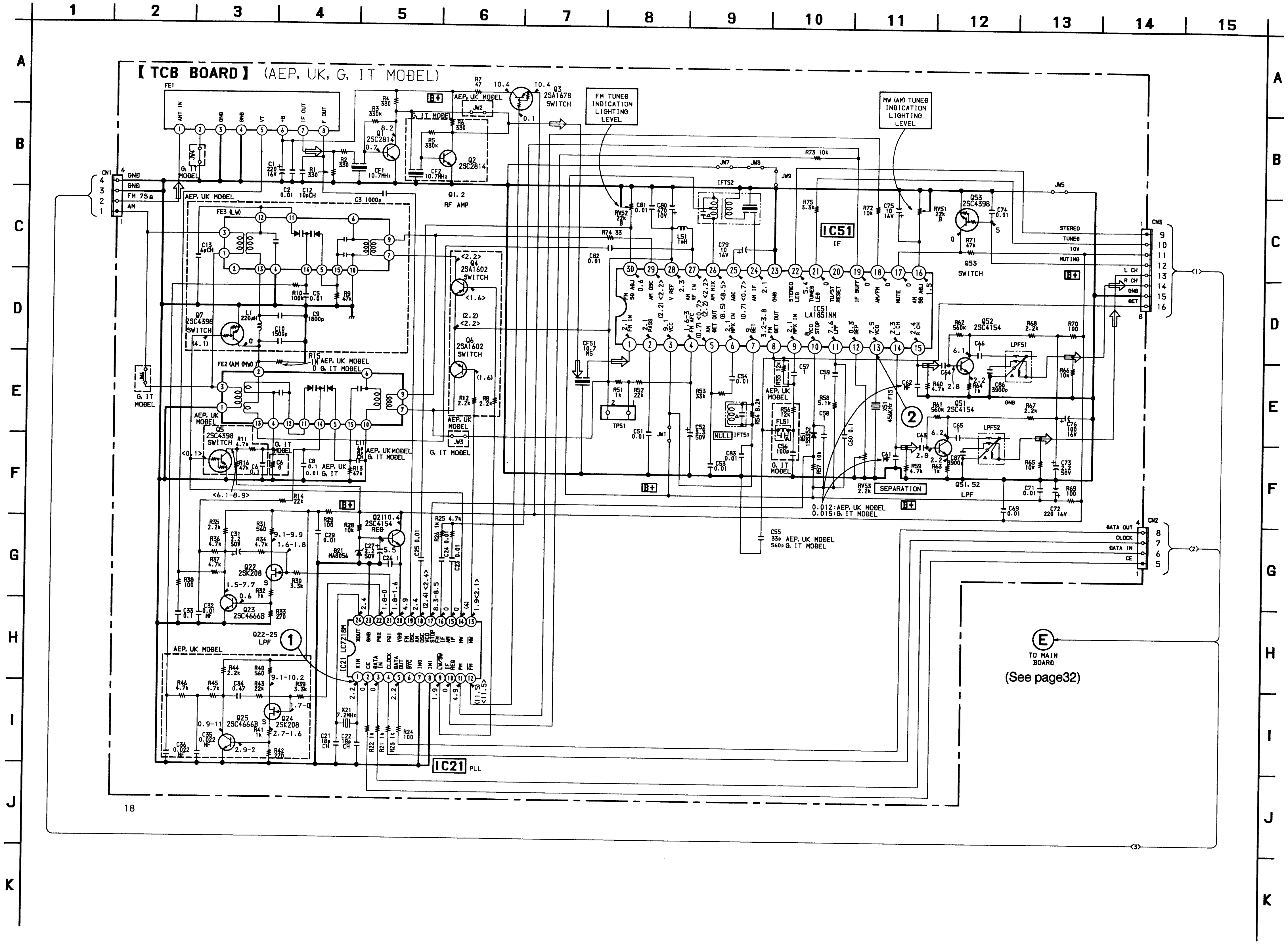
CND : Canadian
MX : Mexican
AUS : Australian
EA : Saudi Arabia
JE : Tourist
MY : Malaysia
SP : Singapore

• SCHEMATIC DIAGRAM (AEP, UK, G, IT Model)

• See page 62 for IC Block Diagrams.

• Waveform




【TCB BOARD】 (AEP, UK, G, IT MODEL)
FE1
ANT IN
GND
VT
+B
IF OUT
F OUT
CN1
GND
GND
FM 75Ω
AM
Q1 2SC2814
Q2 2SC2814
Q1, 2 RF AMP
Q3 2SA1678 SWITCH
AEP, UK MODEL
G, IT MODEL
FE3 (L.W)
FE2 (AM (MW))
Q4 2SA1602 SWITCH
Q6 2SA1602 SWITCH
Q5 2SC4398 SWITCH
Q7 2SC4398 SWITCH
FM TUNED INDICATION LIGHTING LEVEL
MW (AM) TUNED INDICATION LIGHTING LEVEL
IFT52
IC51 IF
IC51 LA1851NM
Q53 2SC4398
Q53 SWITCH
Q51, 52 LPF
Q51 2SC4154
Q52 2SC4154
LPF51
LPF52
CF51 10.7
TPS1
IFT51
NULL
FL51
SEPARATION
0.012: AEP, UK MODEL
0.015: G, IT MODEL
C55 33p AEP, UK MODEL 560p: G, IT MODEL
CN3
STEREO
TUNED
10V
MUTING
L CH
R CH
GND
GND
CN2
DATA OUT
CLOCK
DATA IN
CE
Q21 2SC4154 REG
D21 MA8056
Q22 2SK208
Q23 2SC4666B
Q22-25 LPF
Q24 2SK208
Q25 2SC4666B
IC21 LC7218M
X21 7.2MHz
IC21 PLL
Ⓔ TO MAIN BOARD
(See page32)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

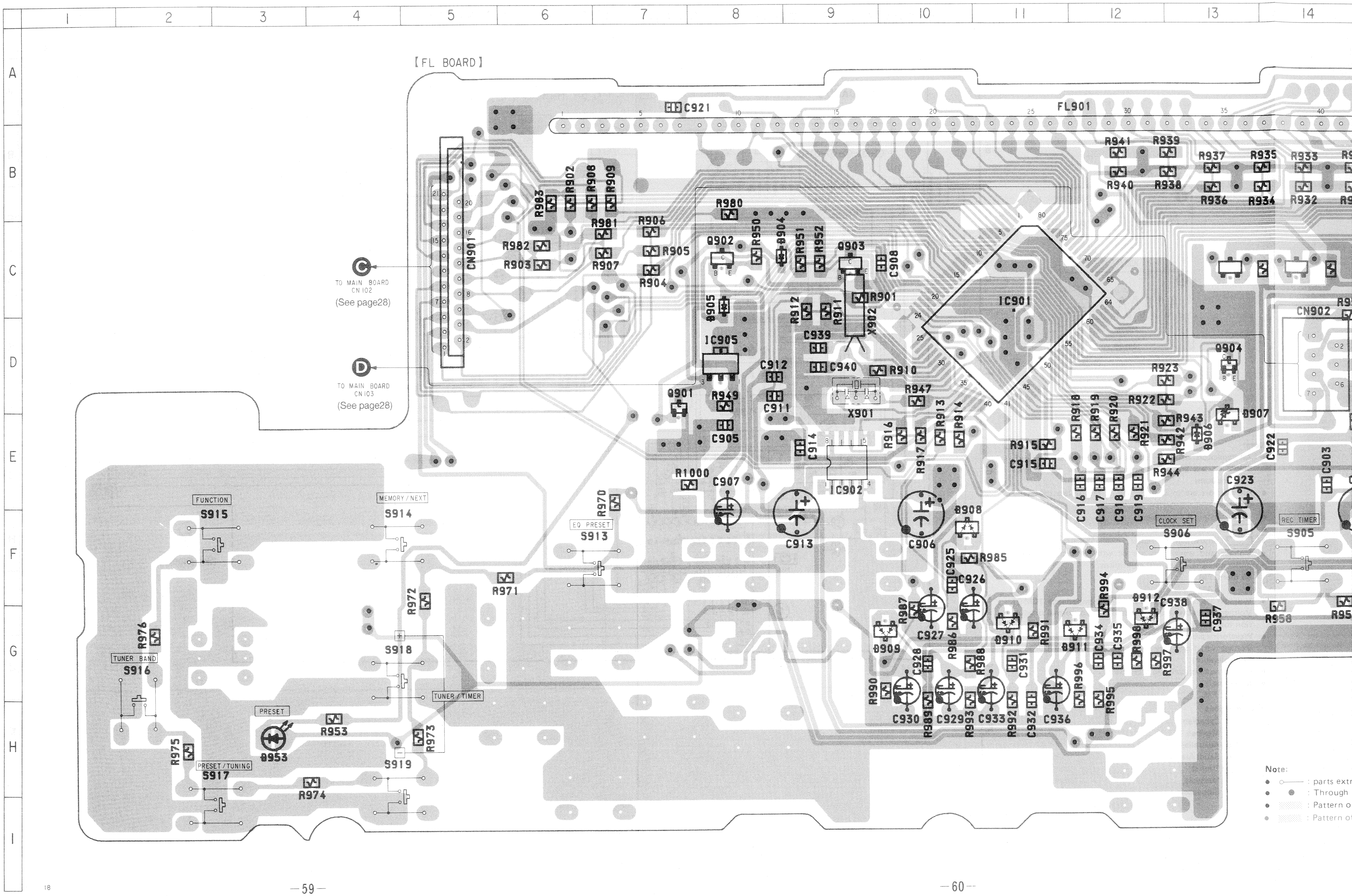
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM

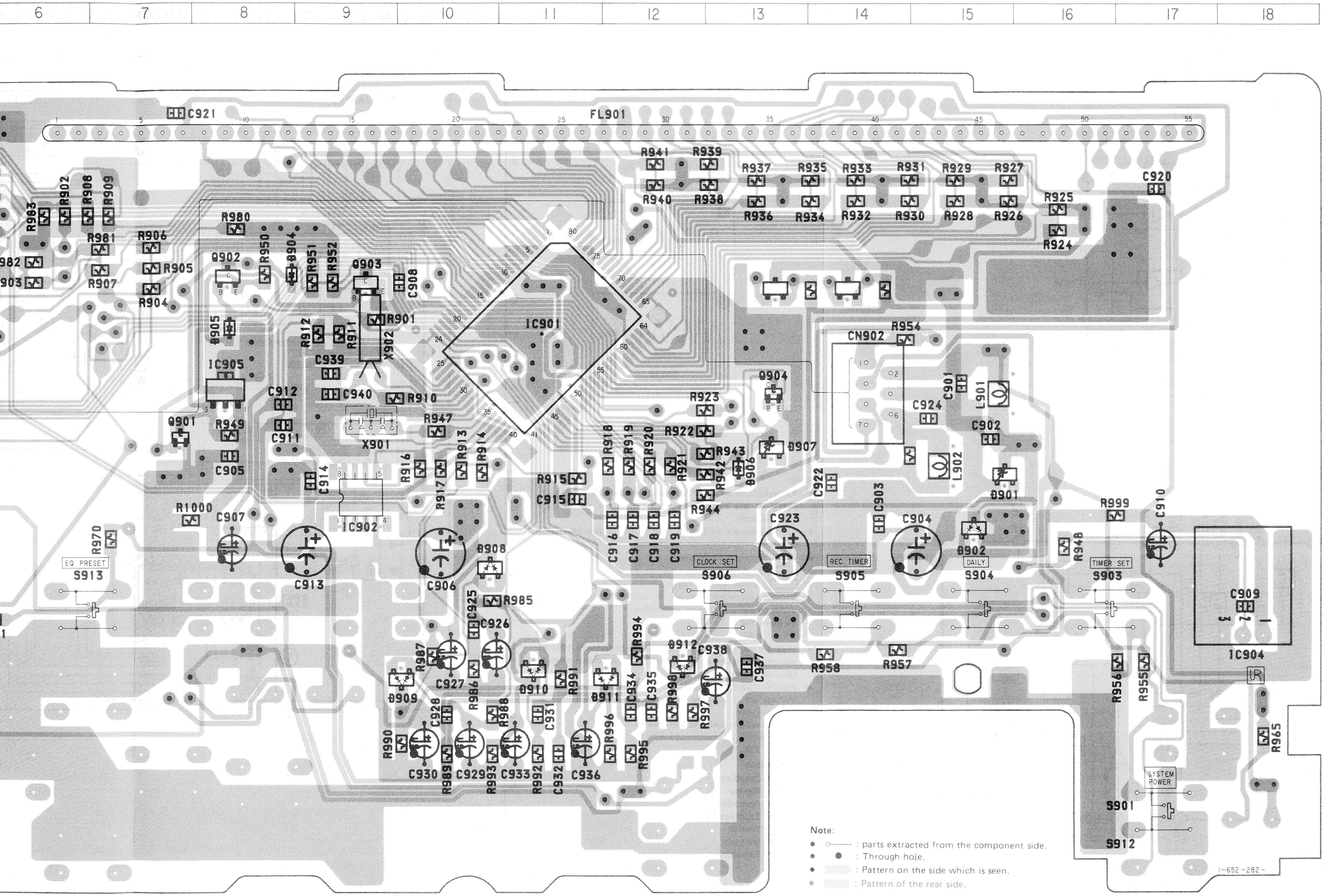
• Abbreviations
G : German
IT : Italian

4-12. PRINTED WIRING BOARD—PANEL Section—

• See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
【FL BOARD】
C921
FL901
CN901
TO MAIN BOARD CN102 (See page28)
TO MAIN BOARD CN103 (See page28)
R983
R902
R908
R909
R981
R982
R903
R907
R906
R905
R904
R980
Q902
R950
D904
R951
R952
Q903
C908
R901
X902
D905
R912
R911
IC905
C939
C940
R910
IC901
C912
C911
X901
R947
Q901
R949
C905
C914
IC902
R916
R917
R913
R914
R915
C915
R1000
C907
C913
C906
D908
R970
EQ PRESET
S913
FUNCTION
S915
MEMORY/NEXT
S914
R971
R972
S918
TUNER/TIMER
R973
S919
R974
R976
TUNER BAND
S916
PRESET
D953
R953
R975
PRESET/TUNING
S917
R985
C925
C926
R987
C927
D909
R986
D910
R988
C931
R991
D911
C934
C935
R994
D912
R998
C938
R997
C937
R990
C928
C930
R989
C929
R993
C933
R992
C932
C936
R996
R995
R941
R939
R940
R938
R937
R935
R936
R934
R933
R932
CN902
Q904
R923
R922
R943
R942
D906
D907
R918
R919
R920
R921
R944
C916
C917
C918
C919
CLOCK SET
S906
C923
C922
C903
REC TIMER
S905
R958
Note:
: parts extr
: Through
: Pattern o
: Pattern o

• See page 26, 27 for Semiconductor Lead Layouts.


6
7
8
9
10
11
12
13
14
15
16
17
18
FL901
C921
IC901
IC902
IC904
IC905
CN902
X901
X902
Q901
Q902
Q903
Q904
D901
D902
D904
D905
D906
D907
D908
D909
D910
D911
D912
C901
C902
C903
C904
C905
C906
C907
C908
C909
C910
C911
C912
C913
C914
C915
C916
C917
C918
C919
C920
C922
C923
C924
C925
C926
C927
C928
C929
C930
C931
C932
C933
C934
C935
C936
C937
C938
C939
C940
L901
L902
R901
R902
R903
R904
R905
R906
R907
R908
R909
R910
R912
R913
R914
R915
R916
R917
R918
R919
R920
R921
R922
R923
R924
R925
R926
R927
R928
R929
R930
R931
R932
R933
R934
R935
R936
R937
R938
R939
R940
R941
R942
R943
R944
R947
R948
R949
R950
R951
R952
R954
R955
R956
R957
R958
R965
R970
R980
R981
R982
R983
R985
R986
R987
R988
R989
R990
R991
R992
R993
R994
R995
R996
R997
R998
R999
R1000
EQ PRESET
S913
CLOCK SET
S906
REC TIMER
S905
DAILY
S904
TIMER SET
S903
SYSTEM POWER
S901
S912
1-652-282-

Note:

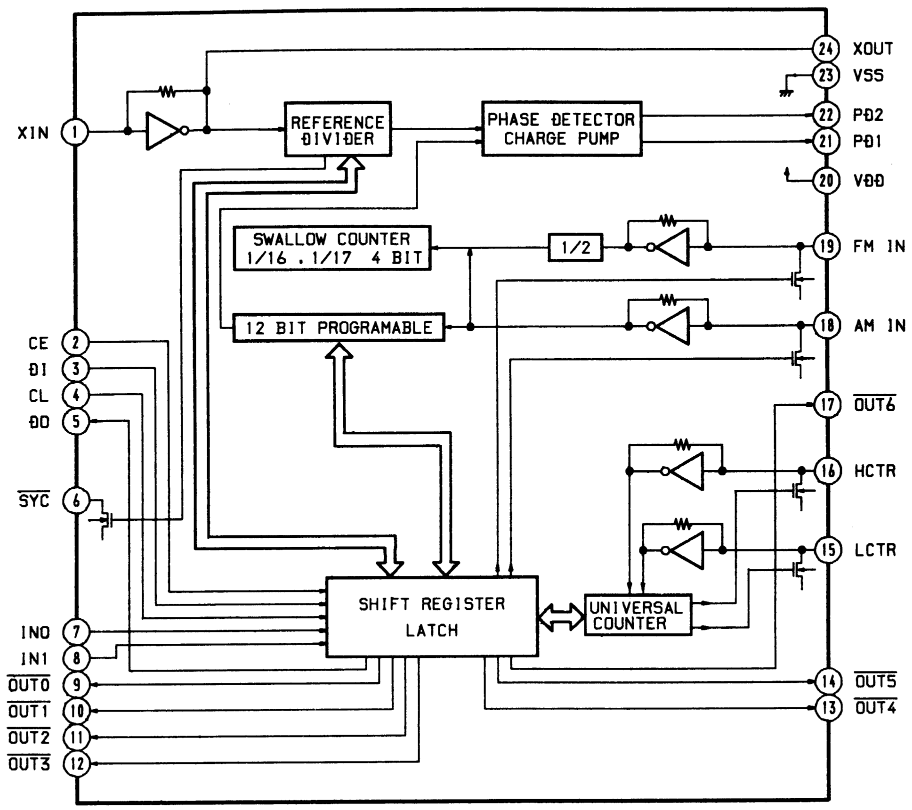
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

• Semiconductor Location

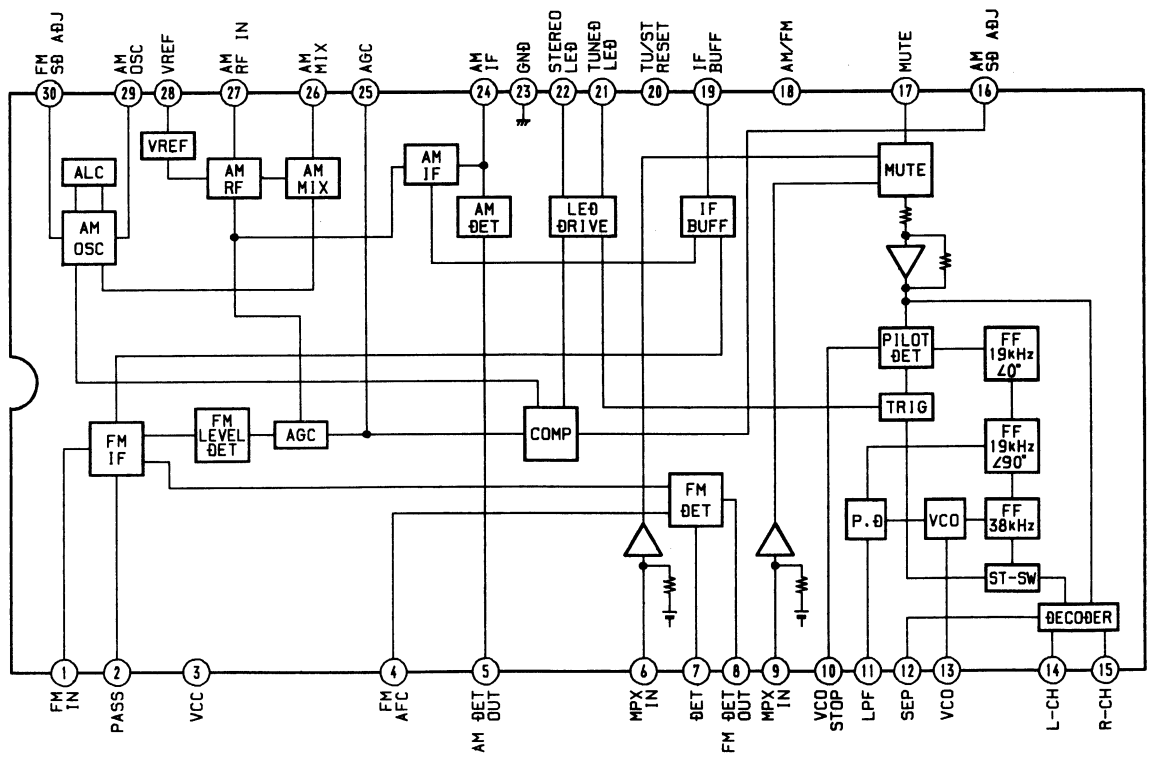
Ref. No.	Location
D901	D - 15
D902	E - 15
D904	C - 8
D905	C - 8
D906	E - 13
D907	D - 13
D908	F - 10
D909	G - 9
D910	G - 11
D911	G - 11
D912	G - 12
D953	H - 3
IC901	C - 11
IC902	E - 9
IC904	E - 17
IC905	D - 8
Q901	D - 7
Q902	C - 8
Q903	C - 9
Q904	D - 13

• IC Block Diagrams

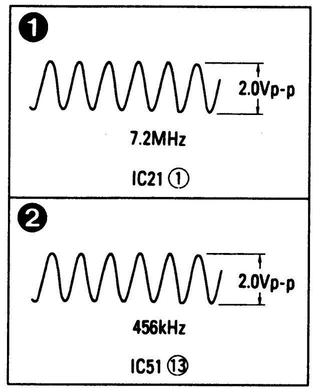
IC21 LC7218M


XIN ①
CE ②
DI ③
CL ④
DO ⑤
SYC ⑥
IN0 ⑦
IN1 ⑧
OUT0 ⑨
OUT1 ⑩
OUT2 ⑪
OUT3 ⑫
㉔ XOUT
㉓ VSS
㉒ PD2
㉑ PD1
⑳ VDD
⑲ FM IN
⑱ AM IN
⑰ OUT6
⑯ HCTR
⑮ LCTR
⑭ OUT5
⑬ OUT4
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16 . 1/17 4 BIT
1/2
12 BIT PROGRAMABLE
SHIFT REGISTER LATCH
UNIVERSAL COUNTER

IC51 LA1851NM


FM SD ADJ ㉚
AM OSC ㉙
VREF ㉘
AM RF IN ㉗
AM MIX ㉖
AGC ㉕
AM IF ㉔
GND ㉓
STEREO LED ㉒
TUNED LED ㉑
TU/ST RESET ⑳
IF BUFF ⑲
AM/FM ⑱
MUTE ⑰
AM SD ADJ ⑯
ALC
AM OSC
VREF
AM RF
AM MIX
AM IF
AM DET
LED DRIVE
IF BUFF
MUTE
PILOT DET
FF 19kHz ∠0°
TRIG
FF 19kHz ∠90°
FM IF
FM LEVEL DET
AGC
COMP
FM DET
P.D
VCO
FF 38kHz
ST-SW
DECODER
① FM IN
② PASS
③ VCC
④ FM AFC
⑤ AM DET OUT
⑥ MPX IN
⑦ DET
⑧ FM DET OUT
⑨ MPX IN
⑩ VCO STOP
⑪ LPF
⑫ SEP
⑬ VCO
⑭ L-CH
⑮ R-CH

• Waveform



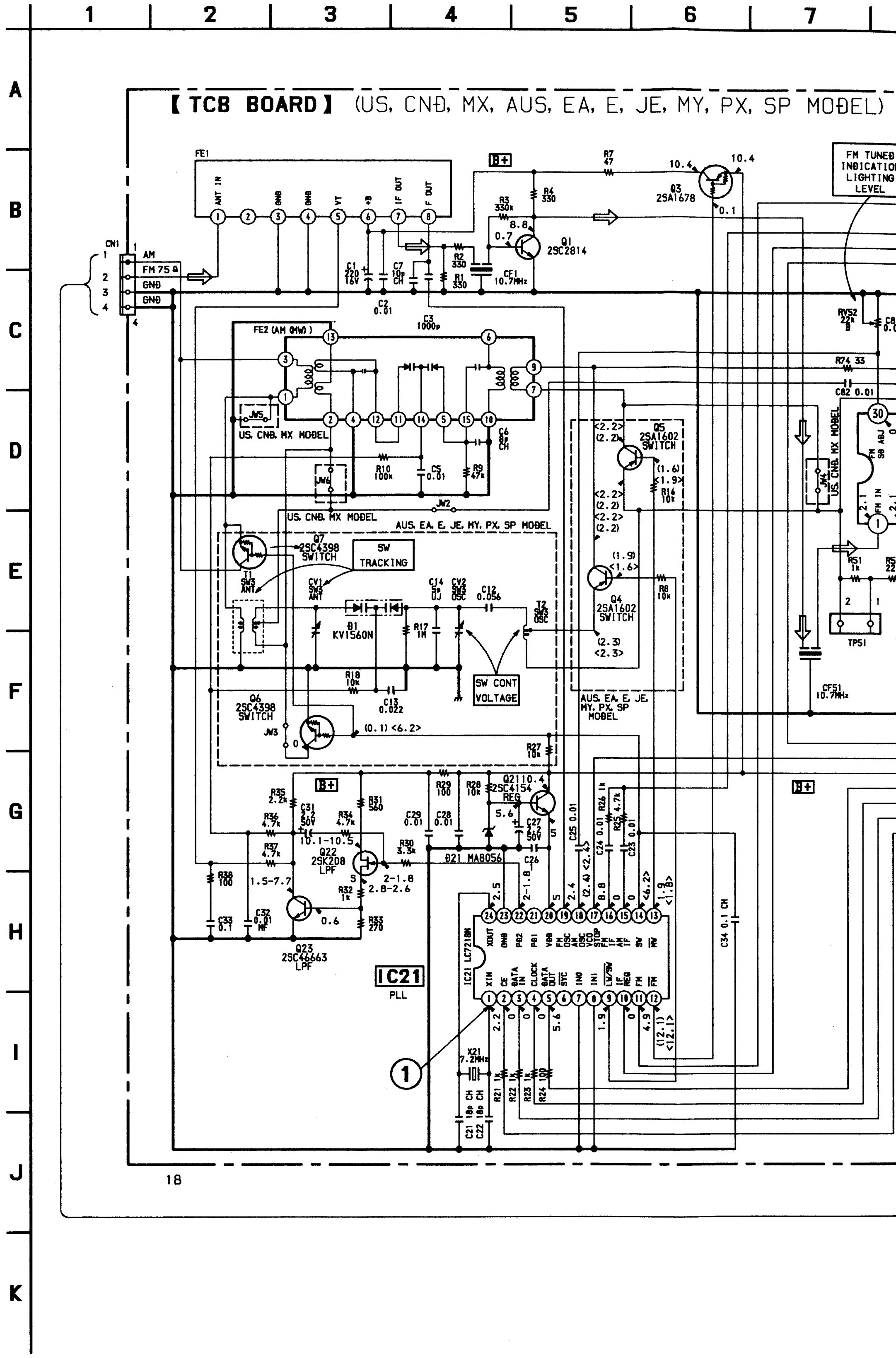
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM

• Abbreviations

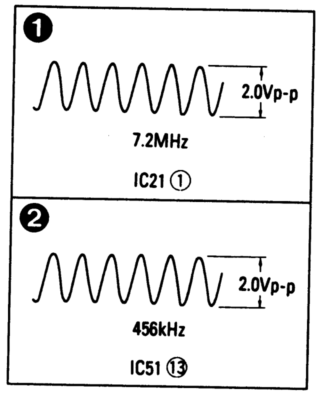
CND : Canadian
MX : Mexican
AUS : Australian
EA : Saudi Arabia
JE : Tourist
MY : Malaysia
SP : Singapore

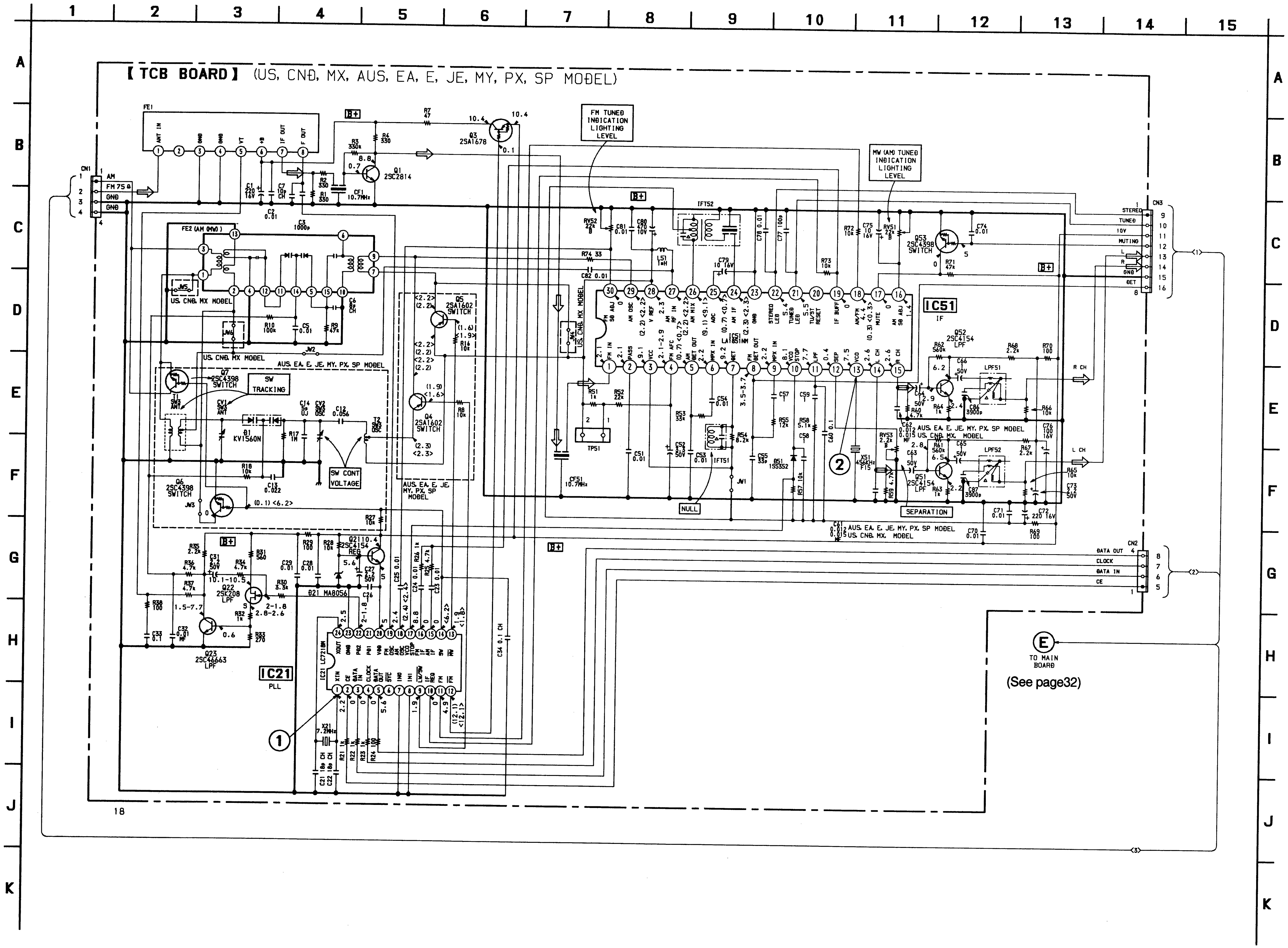
4-13. SCHEMATIC DIAGRAM—TUNER Section— (US, CND, MX, AUS, EA, E, JE, MY,


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
【TCB BOARD】 (US, CND, MX, AUS, EA, E, JE, MY, PX, SP MODEL)
FE1
B+
FM TUNED INDICATION LIGHTING LEVEL
Q3 2SA1678
Q1 2SC2814
CF1 10.7MHz
CN1
AM
FM 75Ω
GND
FE2 (AM OWO)
US, CND, MX MODEL
AUS, EA, E, JE, MY, PX, SP MODEL
Q5 2SA1602 SWITCH
Q4 2SA1602 SWITCH
Q7 2SC4398 SWITCH
SW TRACKING
T1 SW3 ANT
CV1 SW3 ANT
D1 KV1560N
SW CONT VOLTAGE
Q6 2SC4398 SWITCH
Q21 2SC4154 REG
Q22 2SK208 LPF
Q23 2SC4663 LPF
D21 MA8056
IC21 PLL
X21 7.2MHz
CF51 10.7MHz
TP51
①
18

4-13. SCHEMATIC DIAGRAM—TUNER Section— (US, CND, MX, AUS, EA, E, JE, MY, PX, SP Model)

• Waveform





1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
【TCB BOARD】 (US, CND, MX, AUS, EA, E, JE, MY, PX, SP MODEL)
FE1
CN1
AM
FM 75 Ω
GND
GND
FE2 (AM (MW))
Q1 2SC2814
Q3 2SA1678
FM TUNED INDICATION LIGHTING LEVEL
MW (AM) TUNED INDICATION LIGHTING LEVEL
IFT52
IC51 IF
Q53 2SC4398 SWITCH
Q52 2SC4154 LPF
Q51 2SC4154 LPF
LPF51
LPF52
R CH
L CH
CN3
STEREO
TUNED
10V
MUTING
GND
GET
Q5 2SA1602 SWITCH
Q4 2SA1602 SWITCH
US, CND, MX MODEL
AUS, EA, E, JE, MY, PX, SP MODEL
Q7 2SC4398 SWITCH
SW TRACKING
D1 KV1560N
SW CONT VOLTAGE
Q6 2SC4398 SWITCH
Q21 2SC4154 REG
Q22 2SK208 LPF
Q23 2SC4663 LPF
D21 MA8056
IC21 LC7218M PLL
X21 7.2MHz
TPS1
CF51 10.7MHz
CF1 10.7MHz
X51 456kHz
NULL
SEPARATION
CN2
DATA OUT
CLOCK
DATA IN
CE
TO MAIN BOARD
Ⓔ
(See page32)
①
②
18

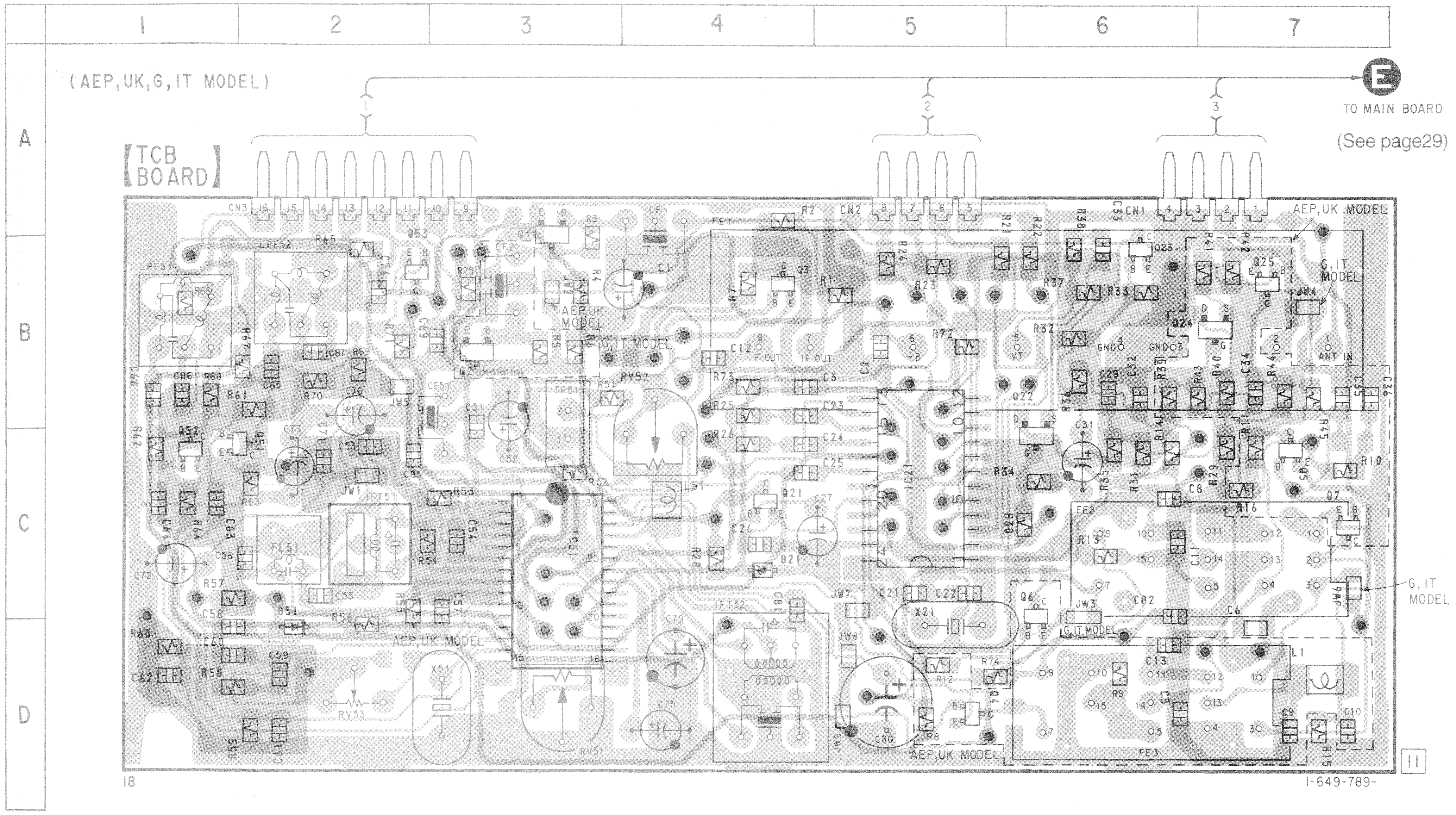
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM

• **Abbreviations**

CND : Canadian
MX : Mexican
AUS : Australian
EA : Saudi Arabia
JE : Tourist
MY : Malaysia
SP : Singapore

• **PRINTED WIRING BOARD (AEP, UK, G, IT Model)** • See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
A
B
C
D
(AEP,UK,G,IT MODEL)
TCB BOARD
E
TO MAIN BOARD
(See page29)
CN1
CN2
CN3
AEP,UK MODEL
G,IT MODEL
ANT IN
IC21
IC51
X21
X51
RV51
RV52
RV53
FL51
IFT51
IFT52
LPF51
LPF52
FE1
FE2
FE3
L1
L51
18
1-649-789-
11

• Semiconductor Location

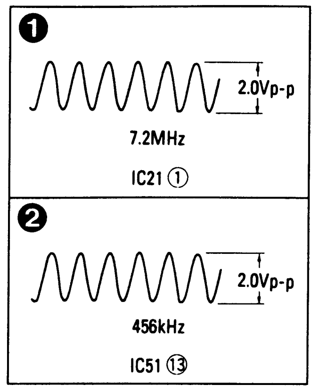
Ref. No.	Location
D21	C-4
D51	D-2
IC21	C-5
IC51	C-3
Q1	B-3
Q2	B-3
Q3	B-3
Q4	D-6
Q5	D-6
Q6	C-7
Q7	D-7
Q21	C-4
Q22	B-6
Q23	B-6
Q24	B-6
Q25	B-7
Q51	C-2
Q52	C-1
Q53	B-3

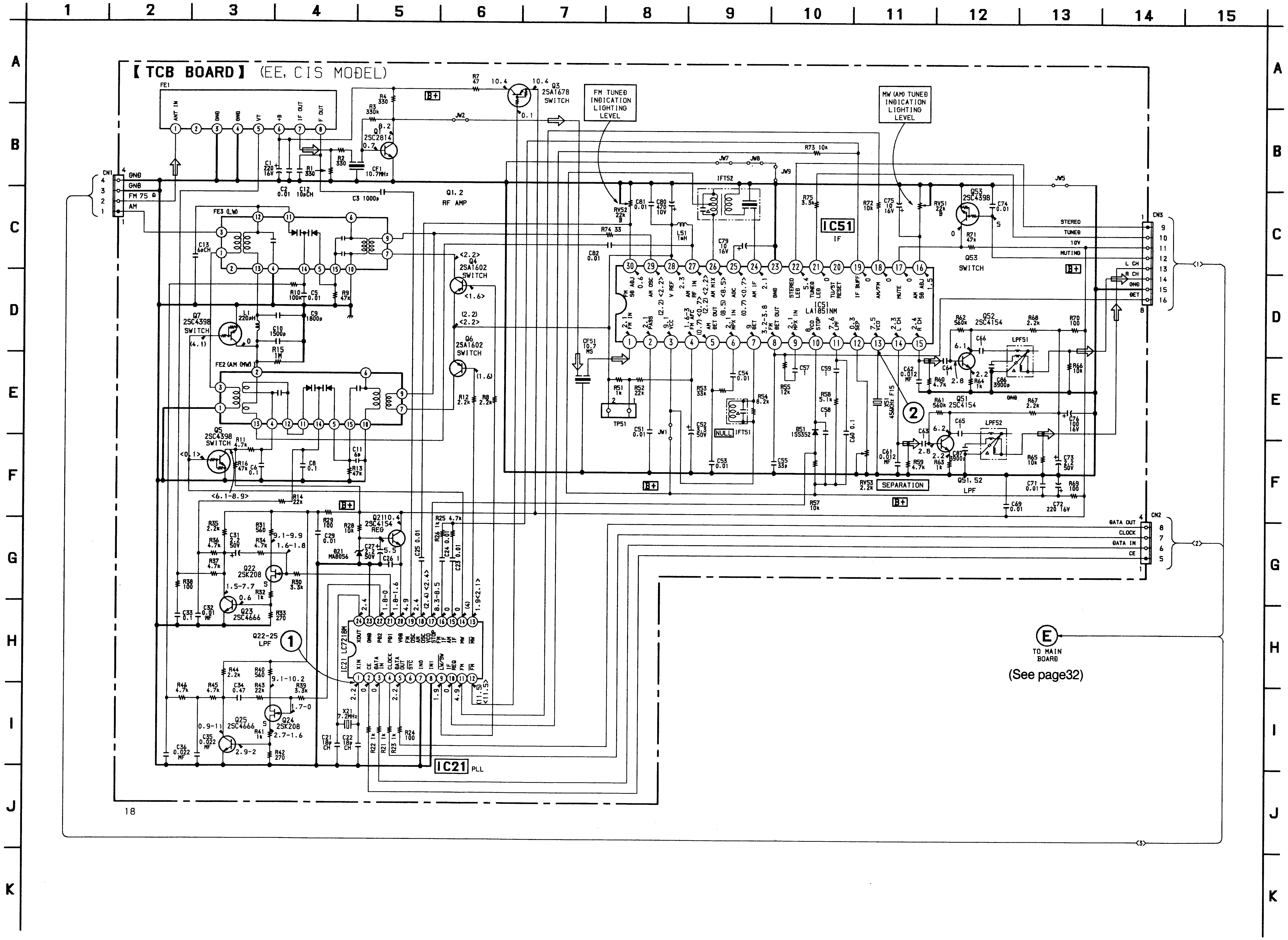
Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ░ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.
- △ : internal component

• Abbreviations
G : German
IT : Italian

• SCHEMATIC DIAGRAM (EE, CIS Model) • See page 62 for IC Block Diagrams.

• Waveform




1
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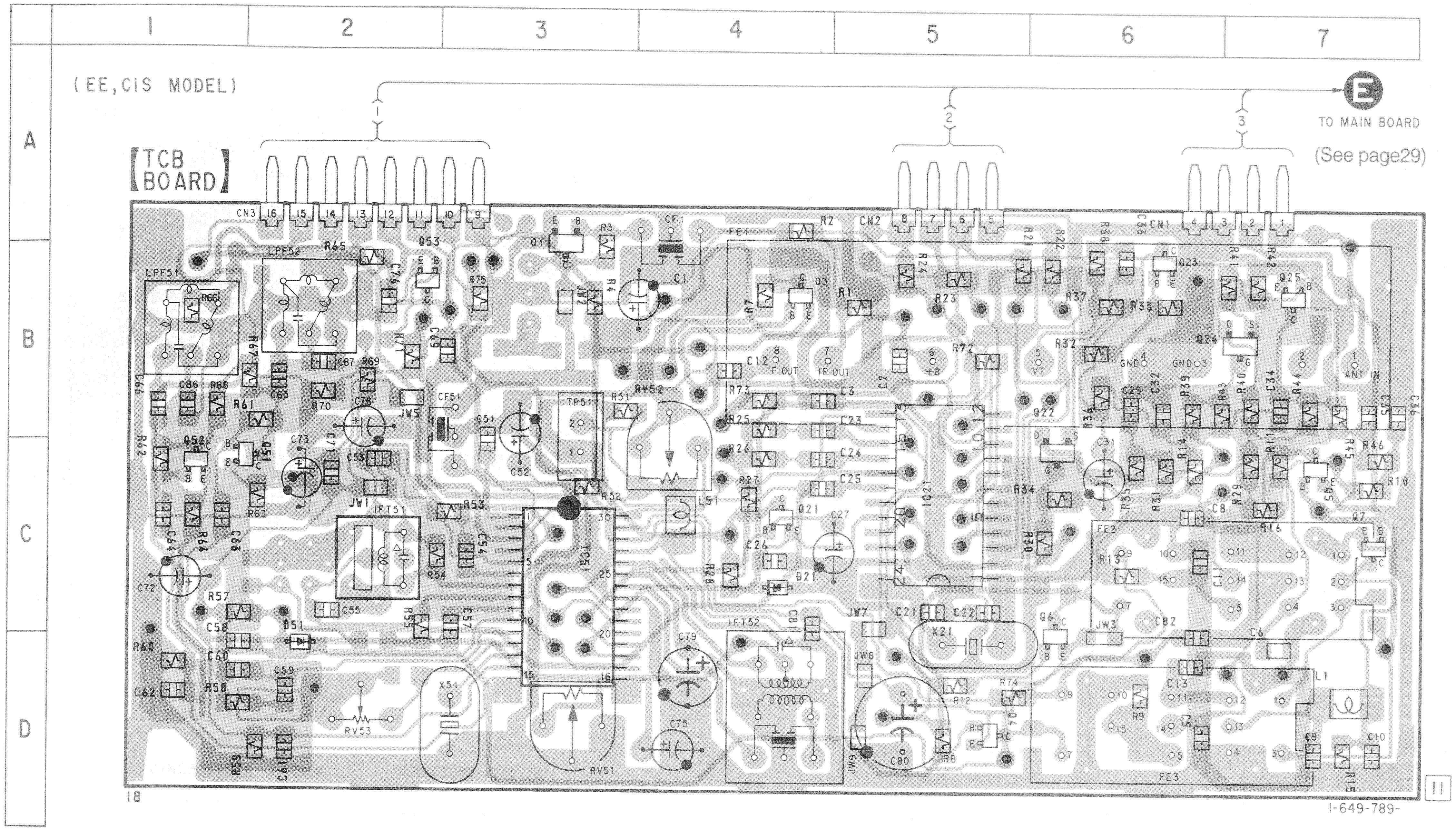
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
【TCB BOARD】 (EE, CIS MODEL)
FE1
ANT IN
GND
GND
VT
+B
IF OUT
F OUT
CN1
GND
GND
FM 75 Ω
AM
Q3
2SA1678
SWITCH
Q1
2SC2814
Q1, 2
RF AMP
CF1
10.7MHz
C3 1000p
FM TUNED
INDICATION
LIGHTING
LEVEL
MW (AM) TUNED
INDICATION
LIGHTING
LEVEL
FE3 (LW)
FE2 (AM (MW))
Q7
2SC4398
SWITCH
Q5
2SC4398
SWITCH
Q4
2SA1602
SWITCH
Q6
2SA1602
SWITCH
IFT52
IC51
IF
IC51
LA1851NM
IFT51
NULL
TP51
D51
1SS352
Q53
2SC4398
Q53
SWITCH
Q52
2SC4154
Q51
2SC4154
LPF51
LPF52
Q51, 52
LPF
SEPARATION
CN3
STEREO
TUNED
10V
MUTING
L CH
R CH
GND
DET
CN2
DATA OUT
CLOCK
DATA IN
CE
Q21
2SC4154
REG
D21
MA8056
Q22
2SK208
Q23
2SC4666
Q22-25
LPF
Q24
2SK208
Q25
2SC4666
IC21 LC7218M
X21
7.2MHz
IC21 PLL
B+
①
②
Ⓔ
TO MAIN
BOARD
(See page32)
18

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input Impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
- Abbreviation
  EE : East European

- **PRINTED WIRING BOARD (EE, CIS Model)** • See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.

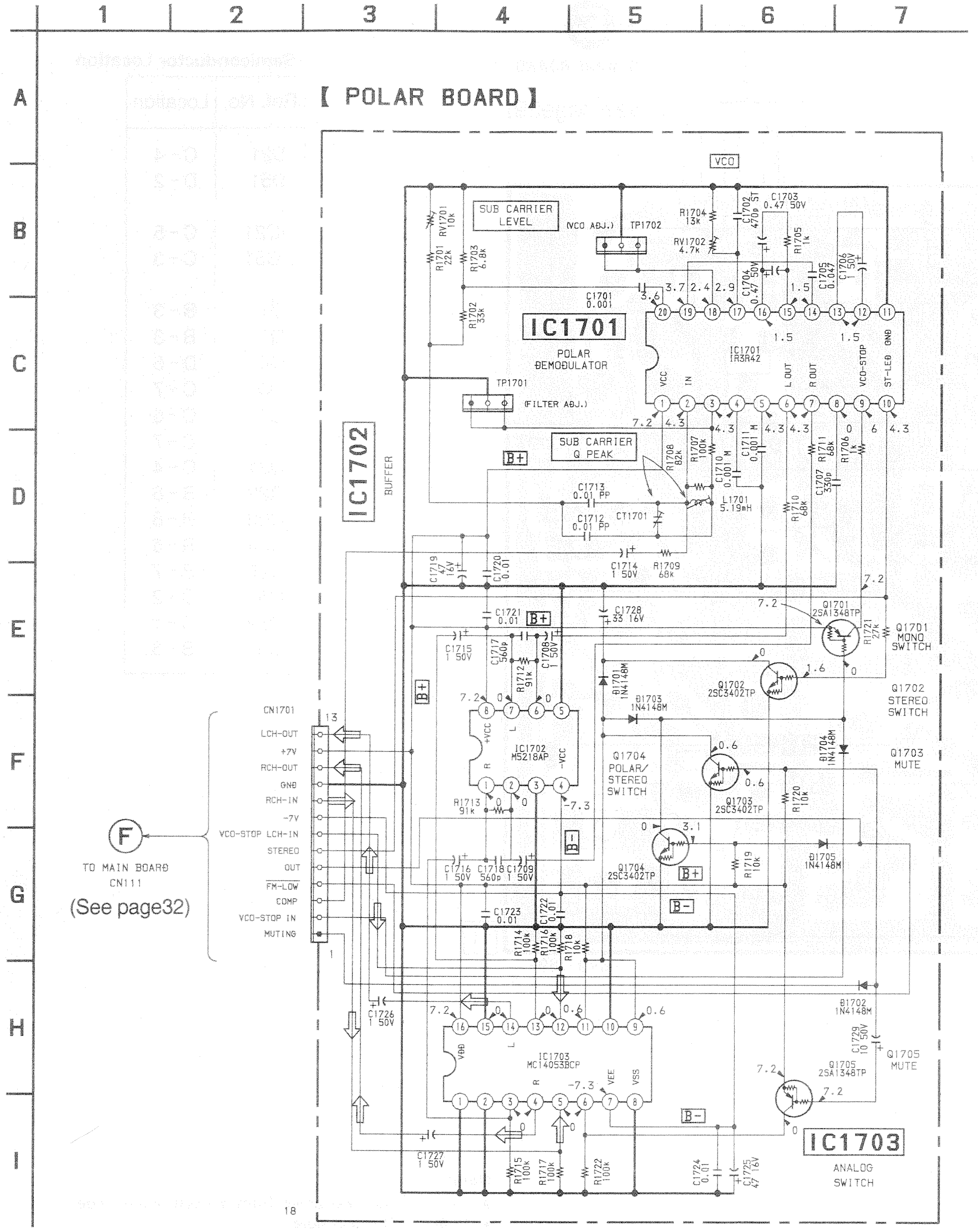

1
2
3
4
5
6
7
A
B
C
D
(EE,CIS MODEL)
TCB BOARD
E
TO MAIN BOARD
(See page29)
CN1
CN2
CN3
IC21
IC51
LPF51
LPF52
IFT51
IFT52
FE1
FE2
FE3
X21
X51
RV51
RV52
RV53
TP51
CF1
CF51
L1
L51
F OUT
IF OUT
+B
VT
GND
ANT IN
18
11
1-649-789-

- **Semiconductor Location**

Ref. No.	Location
D21	C-4
D51	D-2
IC21	C-5
IC51	C-3
Q1	B-3
Q3	B-3
Q4	D-5
Q5	C-7
Q6	C-6
Q7	C-7
Q21	C-4
Q22	B-6
Q23	B-6
Q24	B-6
Q25	B-7
Q51	C-2
Q52	C-1
Q53	B-3

Note:
- ○— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.
- △ : internal component
- Abbreviation
  EE : East European

4-15. SCHEMATIC DIAGRAM—POLAR Section— (CIS model)

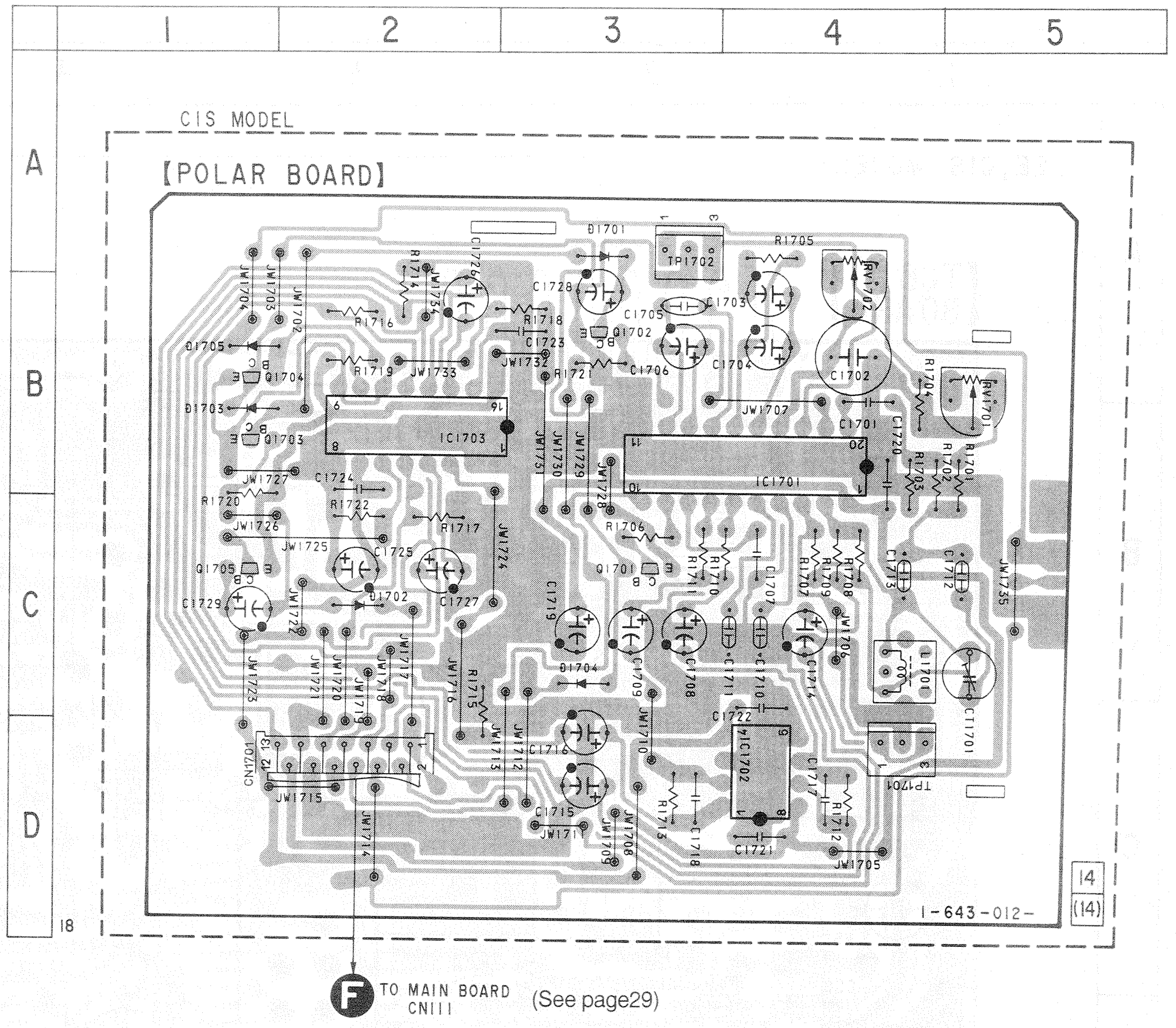

[POLAR BOARD]
IC1701
POLAR DEMODULATOR
IC1701 IR3R42
IC1702
BUFFER
IC1702 M5218AP
IC1703
ANALOG SWITCH
IC1703 MC14053BCP
SUB CARRIER LEVEL
VCO ADJ.
TP1702
TP1701
FILTER ADJ.
SUB CARRIER Q PEAK
VCO
Q1701 MONO SWITCH
Q1702 STEREO SWITCH
Q1703 MUTE
Q1704 POLAR/STEREO SWITCH
Q1705 MUTE
CN1701
LCH-OUT
+7V
RCH-OUT
GND
RCH-IN
-7V
VCO-STOP LCH-IN
STEREO OUT
FM-LOW COMP
VCO-STOP IN
MUTING
TO MAIN BOARD CN111
(See page32)
B+
B-

4-16. PRINTED WIRING BOARDS—POLAR Section— (CIS model)

- See page 25 for Circuit Boards Location.
- See page 26, 27 for Semiconductor Lead Layouts.

- Semiconductor Location

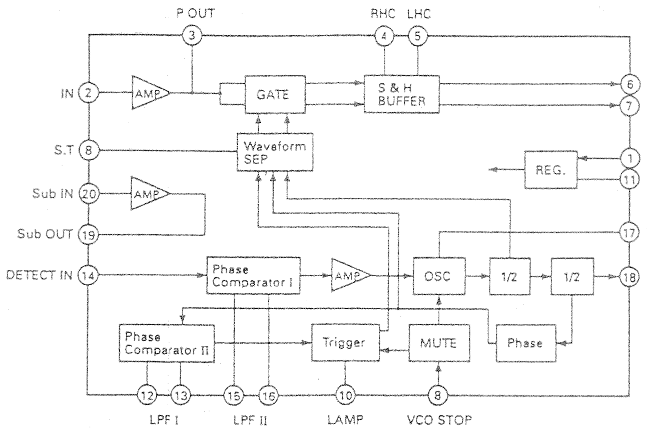
Ref. No.	Location
D1701	A-3
D1702	C-2
D1703	B-1
D1704	C-3
D1705	B-1
IC1701	B-3
IC1702	D-4
IC1703	B-2
Q1701	C-3
Q1702	B-3
Q1703	B-1
Q1704	B-1
Q1705	C-1


CIS MODEL
[POLAR BOARD]
IC1701
IC1702
IC1703
TP1701
TP1702
CN1701
1-643-012-
14
(14)
18
TO MAIN BOARD CNIII
(See page29)

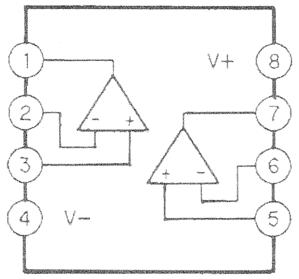
Note:
- ○—— : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.

- IC Block Diagrams

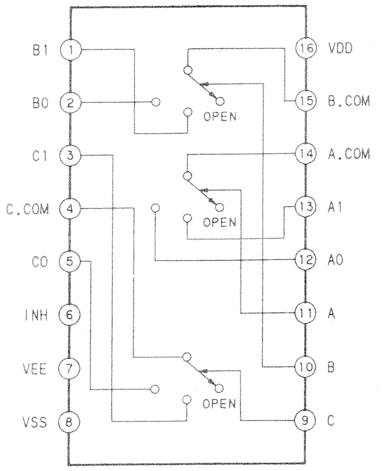
IC1701 IR3R42


P OUT
RHC LHC
IN
S.T
Sub IN
Sub OUT
DETECT IN
AMP
GATE
S & H BUFFER
Waveform SEP
REG.
Phase Comparator I
Phase Comparator II
OSC
1/2
1/2
Trigger
MUTE
Phase
R OUT
L OUT
Vcc
GNG
VCO
MON
LPF I
LPF II
LAMP
VCO STOP

IC1702 M5218AP



IC1703 MC14053BCP


B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

- B+ : B+ Line
- B- : B– Line
- ▭ : adjustment for repair.
- Signal path.
  ⇨ : FM

SECTION 5
EXPLODED VIEWS

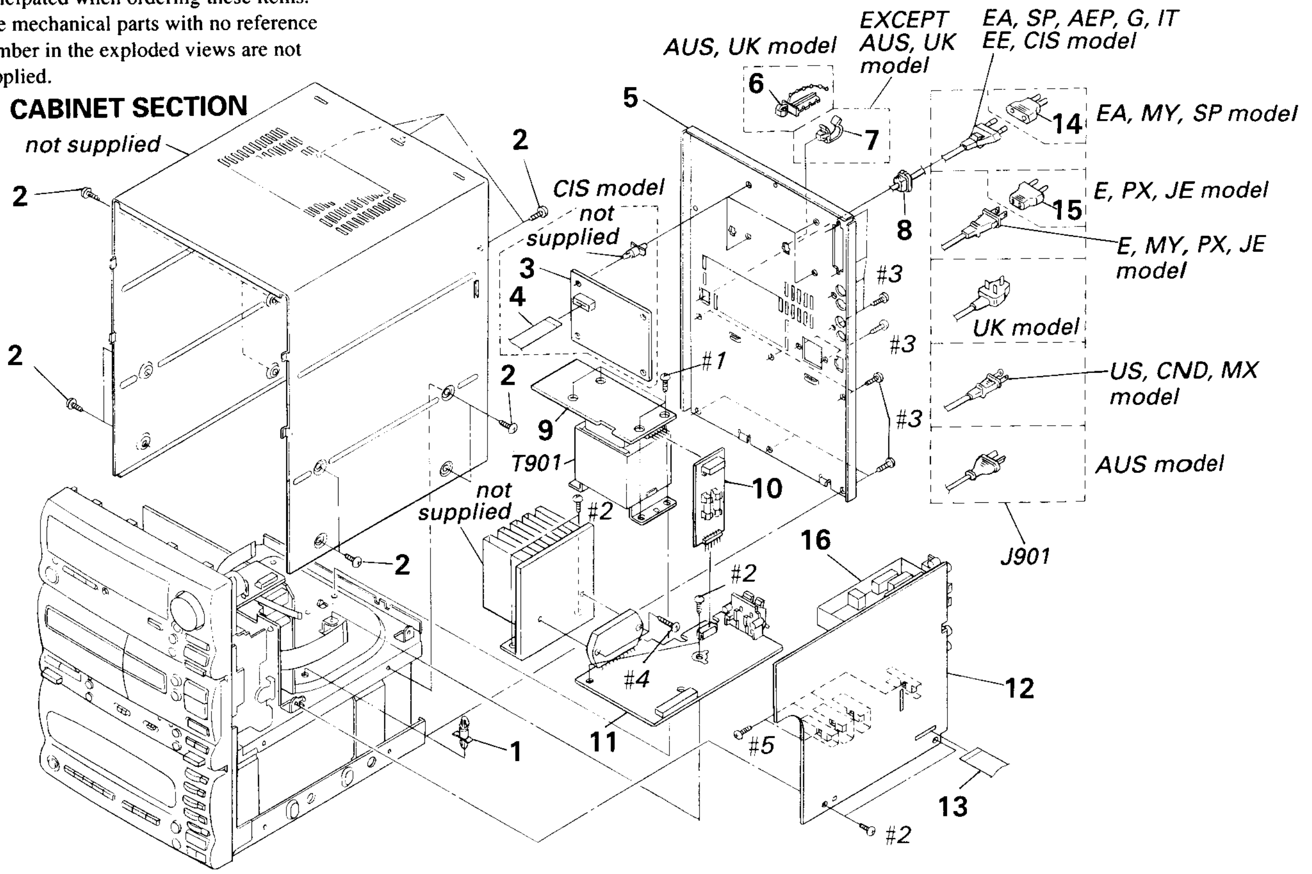
NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " ∗ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviations

AUS : Australian
CND : Canadian
EA : Saudi Arabia
EE : East European
G : German
IT : Italian
JE : Tourist
MY : Malaysia
MX : Mexican
SP : Singapore

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

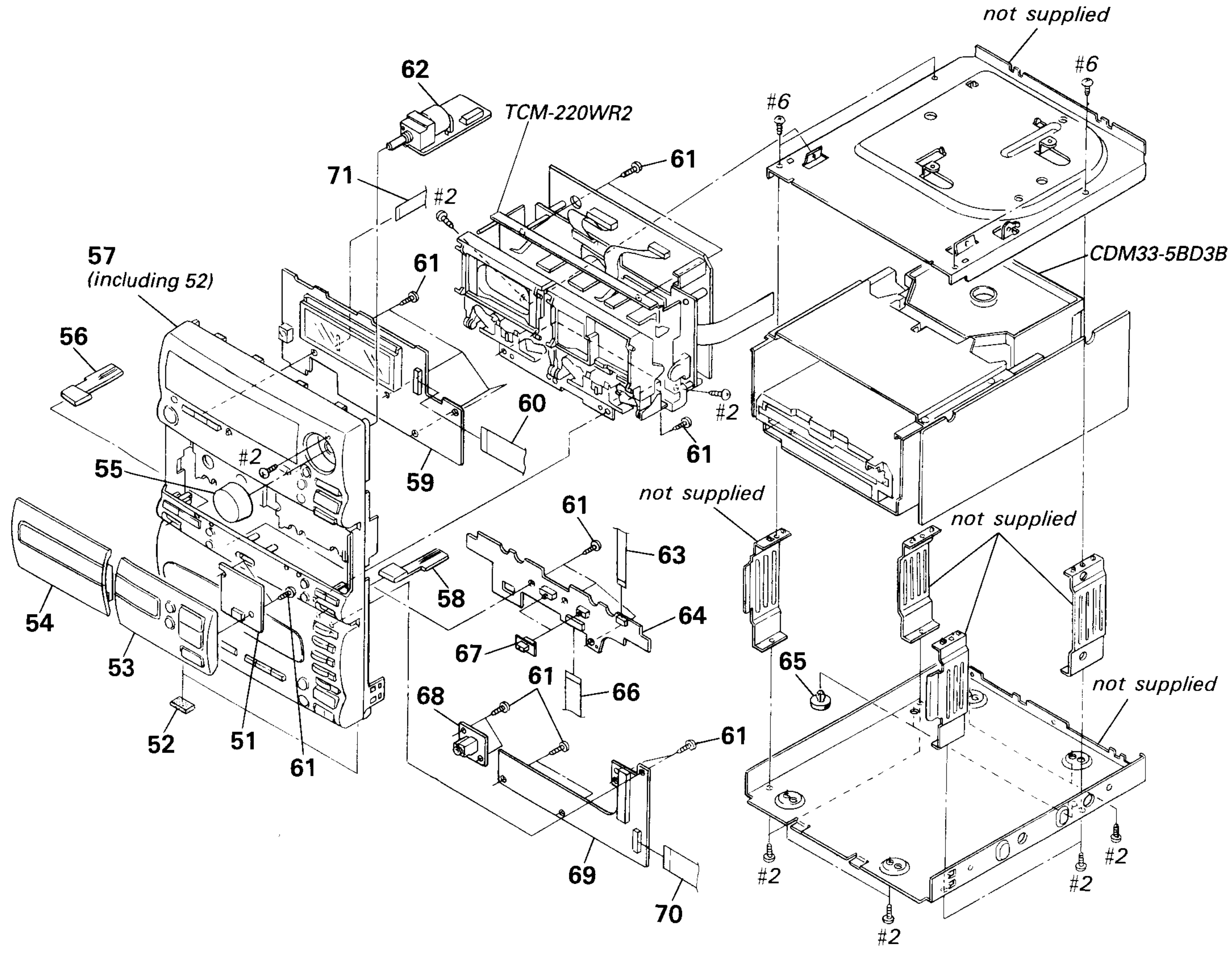
Les components identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET SECTION



Ref.No.	Part No.	Description	Remark
∗1	3-350-847-21	HOLDER, PCB	
2	3-363-099-01	SCREW (CASE 3 TP2)	
∗3	A-4371-478-A	POLAR BOARD, COMPLETE (CIS)	
4	1-575-784-11	WIRE (FLAT TYPE) (13 CORE) (CIS)	
∗5	4-965-815-11	PANEL, BACK (US)	
∗5	4-965-815-21	PANEL, BACK (IT)	
∗5	4-965-815-31	PANEL, BACK (AEP)	
∗5	4-965-815-41	PANEL, BACK (G)	
∗5	4-965-815-51	PANEL, BACK (UK)	
∗5	4-965-815-61	PANEL, BACK (EE)	
∗5	4-965-815-71	PANEL, BACK (CIS)	
∗5	4-965-815-81	PANEL, BACK (E, EA, MX, MY, SP, PX, JE)	
∗5	4-965-815-91	PANEL, BACK (AUS)	
∗5	4-967-893-11	PANEL, BACK (CND)	
∗6	4-956-370-02	BAND, PLUG FIXED (AUS, UK)	
∗7	4-949-235-01	HOOK (EXCEPT AUS, UK)	
∗8	3-703-244-00	BUSHING (2104), CORD (EXCEPT E, PX, JE)	
∗8	3-703-571-11	BUSHING (S) (4516), CORD (E, PX, JE)	
∗9	1-652-291-11	TRANSFORMER BOARD	
∗10	1-652-294-11	TRANSFORMER RELAY BOARD	
∗11	A-4369-822-A	POWER BOARD, COMPLETE (US, CND, MX)	
∗11	A-4369-826-A	POWER BOARD, COMPLETE (EXCEPT US, CND, MX, G, IT)	
∗11	A-4371-819-A	POWER BOARD, COMPLETE (G, IT)	
∗12	A-4369-820-A	MAIN BOARD, COMPLETE (US, CND, MX)	
∗12	A-4369-821-A	MAIN BOARD, COMPLETE (E, AUS, EA, MY, SP, PX, JE)	
∗12	A-4369-846-A	MAIN BOARD, COMPLETE (AEP, UK)	
∗12	A-4369-847-A	MAIN BOARD, COMPLETE (G, IT)	
∗12	A-4371-475-A	MAIN BOARD, COMPLETE (EE)	
∗12	A-4371-477-A	MAIN BOARD, COMPLETE (CIS)	
13	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	
⚠14	1-569-008-11	ADAPTER, CONVERSION 2P (EA, MY, SP)	
⚠15	1-569-007-11	ADAPTER, CONVERSION 2P (E, PX, JE)	
∗16	A-4303-459-A	TCB BOARD, COMPLETE (AEP, UK)	
∗16	A-4303-460-A	TCB BOARD, COMPLETE (G, IT)	
∗16	A-4303-461-A	TCB BOARD, COMPLETE (AUS, EA, E, JE, MY, PX, SP)	
∗16	A-4303-462-A	TCB BOARD, COMPLETE (US, CND, MX)	
∗16	A-4303-480-A	TCB BOARD, COMPLETE (EE, CIS)	
⚠J901	1-574-805-41	CORD, POWER (EA, SP, AEP, G, IT, EE, CIS)	
⚠J901	1-574-902-11	CORD, POWER (E, MY, PX, JE)	
⚠J901	1-590-083-11	CORD, POWER (AUS)	
⚠J901	1-690-609-21	CORD, POWER (US, CND, MX)	
⚠J901	1-696-570-21	CORD, POWER (UK)	
⚠T901	1-426-833-11	TRANSFORMER, POWER (US)	
⚠T901	1-426-834-11	TRANSFORMER, POWER (CND)	
⚠T901	1-426-835-11	TRANSFORMER, POWER (AEP, G, IT, EE, CIS)	
⚠T901	1-426-836-11	TRANSFORMER, POWER (AUS, UK)	
⚠T901	1-426-837-11	TRANSFORMER, POWER (E, EA, MX, MY, SP, PX, JE)	

5-2. CHASSIS SECTION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not supplied
not supplied
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not supplied
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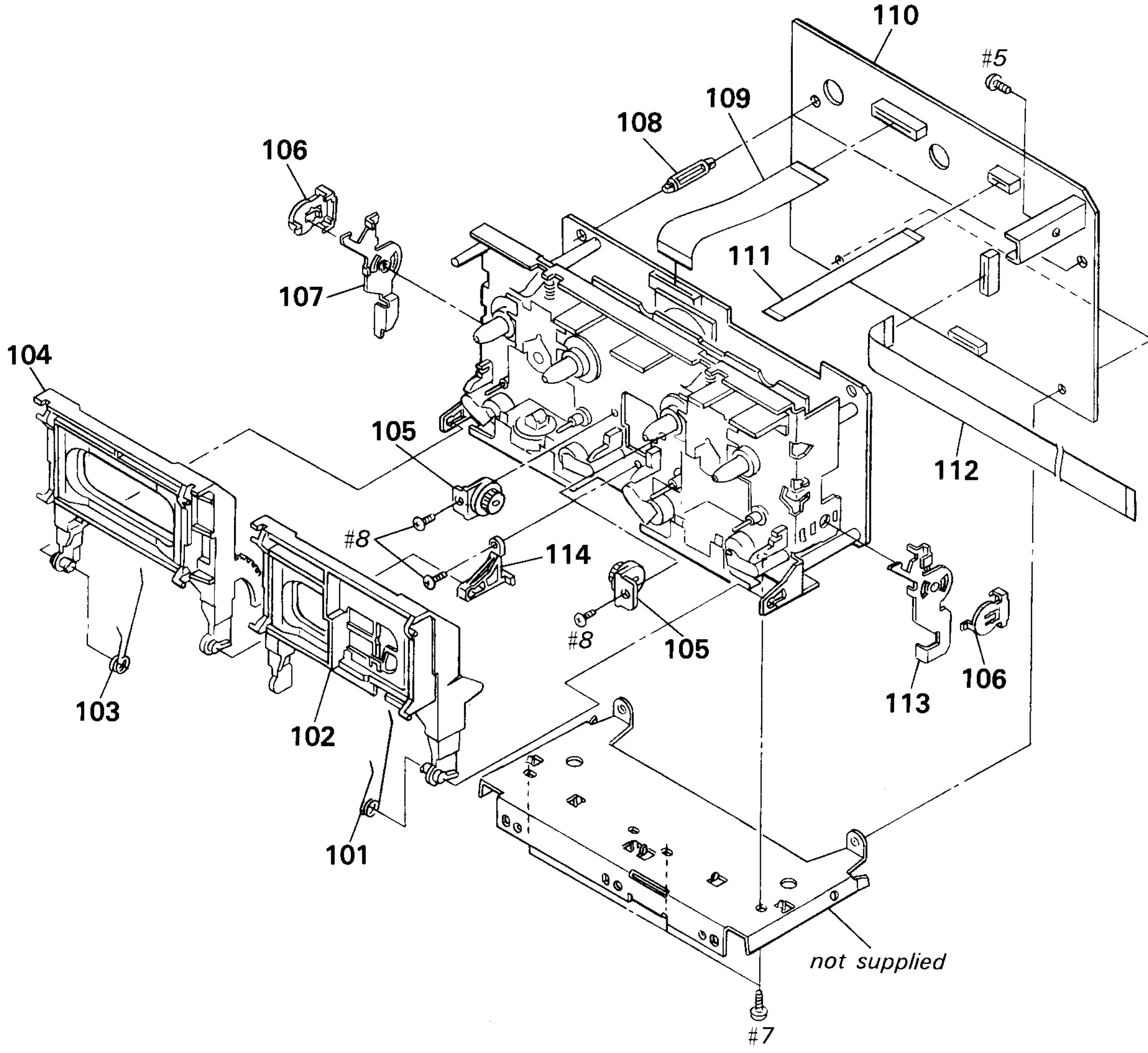
#2
#2
#2
70
#2

Ref.No.	Part No.	Description	Remark
*51	1-652-279-11	TC FUTA BOARD	
52	4-930-336-61	FOOT (FELT)	
53	X-4944-809-1	LID (B) ASSY, CASSETTE	
54	X-4944-808-1	LID (A) ASSY, CASSETTE	
55	4-963-285-01	KNOB (V)	
56	4-965-856-01	BUTTON (E-A)	
57	X-4944-810-1	PANEL ASSY, FRONT (US,CND,AEP,UK,G,IT,EE ,CIS)	
57	X-4944-811-1	PANEL ASSY, FRONT (E,AUS,EA,MX,MY,SP,PX, JE)	
58	4-965-857-01	BUTTON (E-B)	
*59	A-4369-828-A	FL BOARD, COMPLETE (US,CND,MX)	
*59	A-4369-829-A	FL BOARD, COMPLETE (E,AUS,EA,MY,SP,PX)	
*59	A-4369-843-A	FL BOARD, COMPLETE (JE)	
*59	A-4369-849-A	FL BOARD, COMPLETE (AEP,UK)	
*59	A-4369-850-A	PCB, FL BOARD, COMPLETE (G)	
*59	A-4369-851-A	PCB, FL BOARD, COMPLETE (IT)	
*59	A-4369-852-A	FL BOARD, COMPLETE (CIS)	
*59	A-4371-476-A	FL BOARD, COMPLETE (EE)	
60	1-765-498-11	WIRE (FLAT TYPE) (21 CORE)	
61	4-951-620-01	SCREW (2.6X8), +BVTP	
*62	1-652-292-11	VOLUME BOARD	
63	1-765-495-11	WIRE (FLAT TYPE) (7 CORE)	
*64	A-4369-795-A	TC SW BOARD, COMPLETE	
65	4-965-822-01	FOOT	
66	1-765-496-11	WIRE (FLAT TYPE) (17 CORE)	
67	4-965-855-01	KNOB (SL)	
*68	1-652-281-11	HP BOARD	
*69	A-4369-797-A	CD SW BOARD, COMPLETE	
70	1-765-503-11	WIRE, (LAT TYPE) (19 CORE)	
71	1-765-500-11	WIRE (FLAT TYPE) (7 CORE)	

5-3. MECHANISM DECK SECTION-1 (TCM-220WR2)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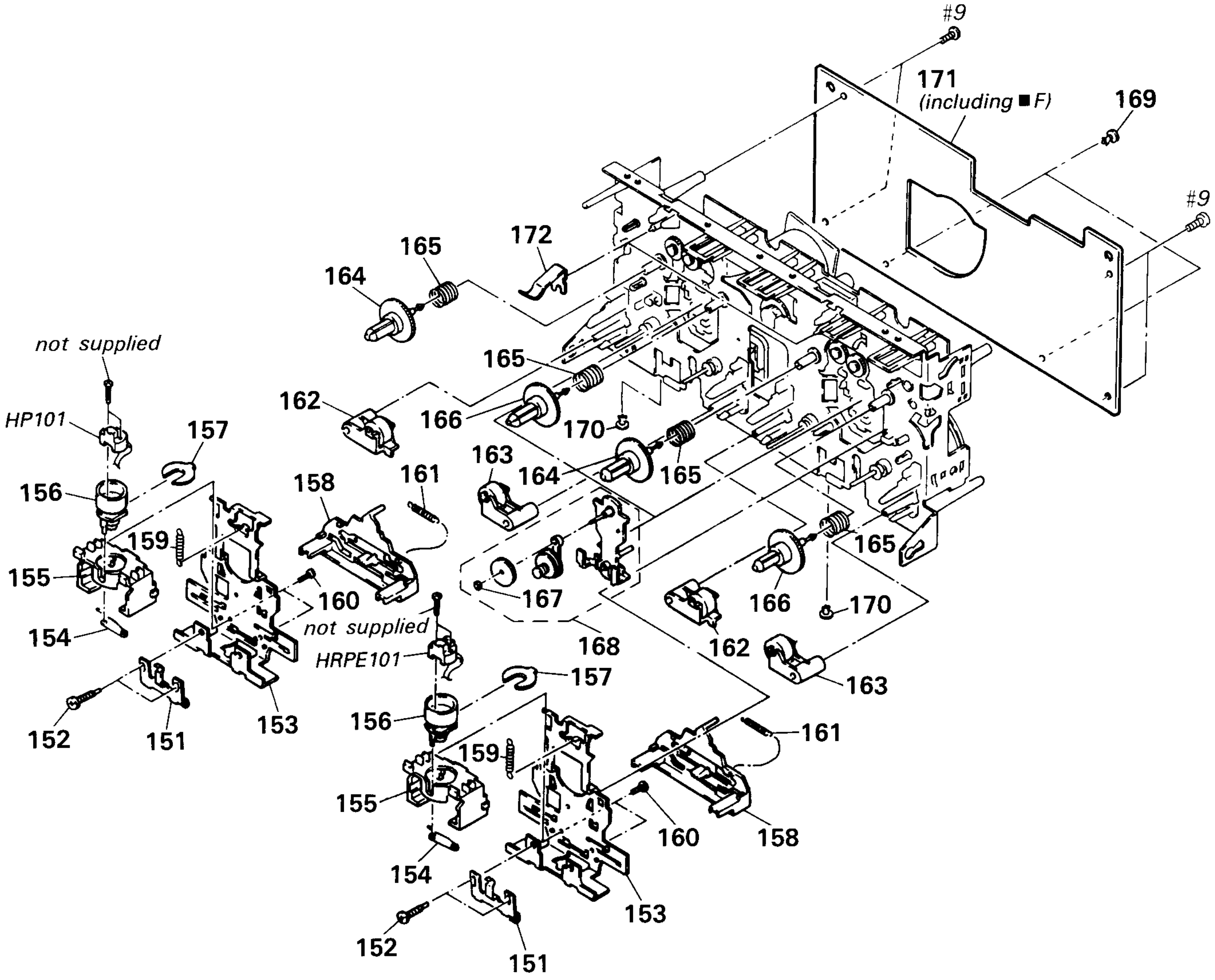
113
101
not supplied
#7

Ref.No.	Part No.	Description	Remark
101	4-959-232-01	SPRING (R), TORSION	
102	X-4944-995-1	HOLDER (R) ASSY, CASSETTE	
103	4-959-231-01	SPRING (L), TORSION	
104	X-4944-994-1	HOLDER (L) ASSY, CASSETTE	
105	3-354-963-01	DAMPER	
106	3-354-957-01	JOINT (LOCK LEVER)	
*107	3-367-709-01	LEVER (LOCK LEVER L)	
*108	3-682-419-21	HOLDER, P.C.B	
109	1-751-820-11	WIRE (FLAT TYPE) (21 CORE)	
*110	A-4357-889-A	TC BOARD, COMPLETE	
111	1-765-501-11	WIRE (FLAT TYPE) (11 CORE)	
112	1-765-502-11	WIRE (FLAT TYPE) (15 CORE)	
113	4-965-877-01	LEVER (LOCK LEVER R)	
*114	3-908-611-01	FULCRUM, HOLDER	

5-4. MECHANISM DECK SECTION-2
(TCM-220WR2)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164
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HP101
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not supplied
HRPE101
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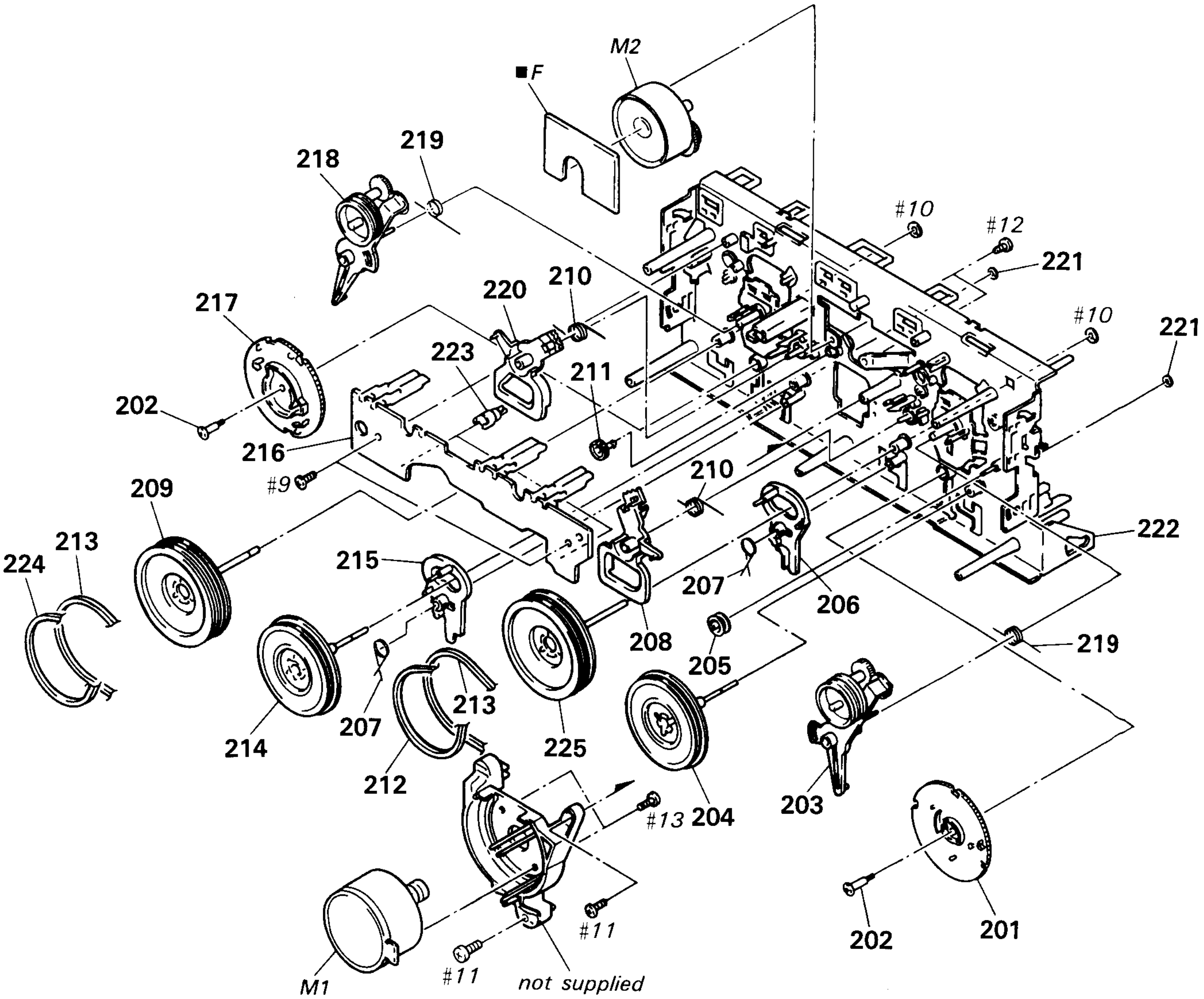
Ref.No.	Part No.	Description	Remark
151	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
152	3-908-561-01	SCREW	
*153	X-3367-584-2	SLIDER (HEAD) ASSY	
154	3-908-556-01	SPRING, HEAD TOGGLE	
155	3-908-558-02	FITTING BLOCK, HEAD	
156	3-908-557-02	ROTARY BLOCK, HEAD	
*157	3-908-559-01	STOPPER, AZIMUTH	
158	3-908-555-01	SLIDER (REV SLIDER)	
159	3-908-602-01	SPRING (HEAD), TENSION	
160	3-388-848-01	SCREW (P2X6) (B TIGHT)	
161	3-911-113-01	SPRING, TENSION	
162	X-3367-589-1	PINCH LEVER (REV) ASSY	

Ref.No.	Part No.	Description	Remark
163	X-3367-588-1	PINCH LEVER (FWD) ASSY	
164	3-908-613-01	GEAR (S), REEL	
165	3-908-596-01	SPRING (REEL), COMPRESSION	
166	X-3367-594-1	REEL (T) ASSY	
167	3-669-465-00	WASHER (1.5), STOPPER	
168	X-3367-592-2	TU ASSY	
169	3-911-116-01	RIVET, PUSH	
170	3-911-116-11	RIVET, PUSH	
*171	A-2007-131-A	AUDIO BOARD, COMPLETE	
172	3-915-490-01	DETENT, HALF	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK-A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK-B)	

5-5. MECHANISM DECK SECTION-3
(TCM-202WR2)
■ F : MOTOR BOARD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212
#13
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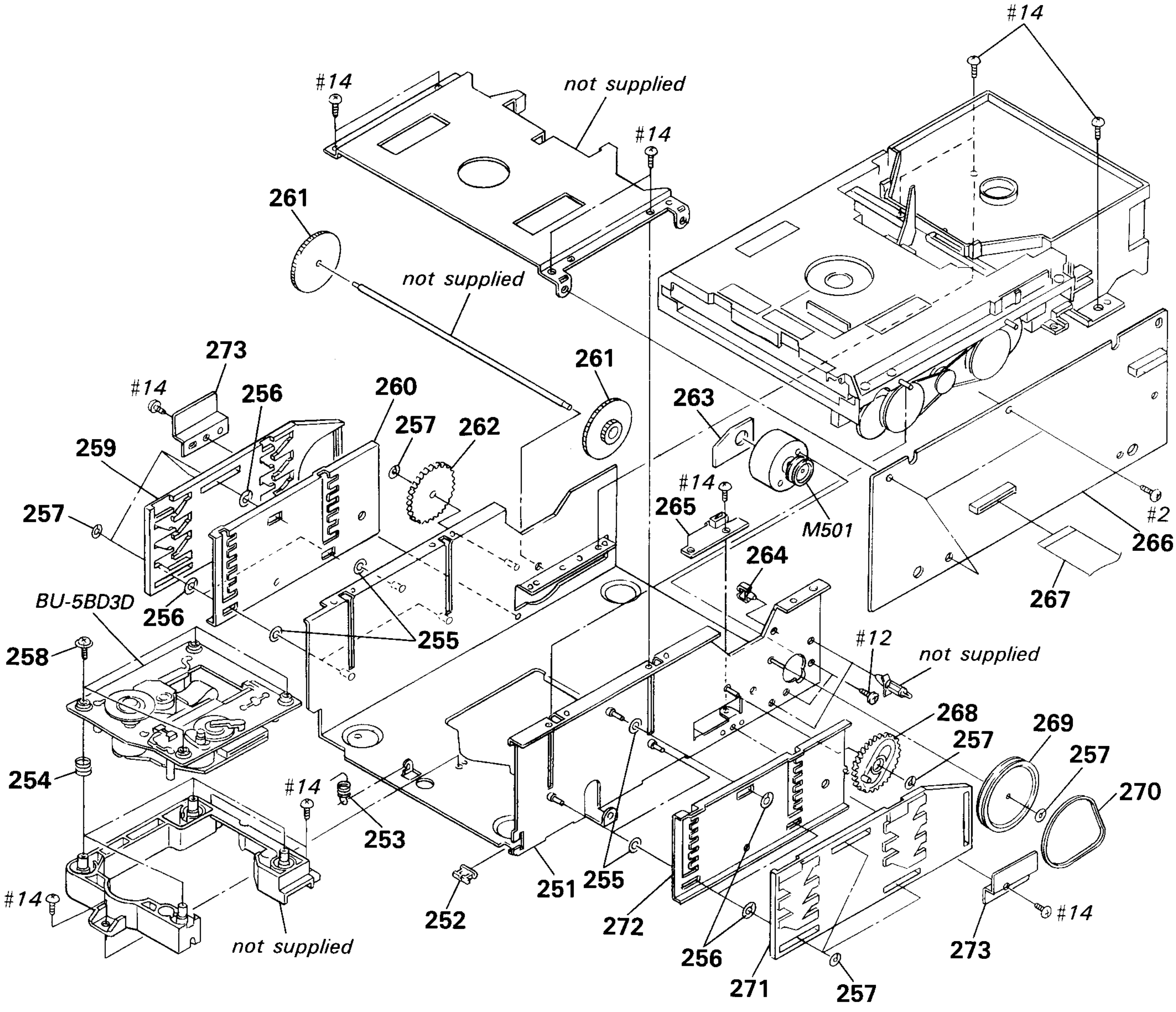
202
201
M1
#11
#11
not supplied

Ref.No.	Part No.	Description	Remark
201	3-908-597-01	CAM (A)	
202	3-908-608-01	SCREW, STEP	
203	X-3367-590-2	ARM (A) ASSY, FR	
204	X-3367-586-1	FLYWHEEL (AR) ASSY	
205	3-908-610-01	PULLEY, TENSION	
206	3-908-599-01	LEVER (REV-A)	
207	3-908-601-01	SPRING (REV LEVER), TORSION	
208	3-908-603-01	LEVER (TRIGGER A)	
209	X-3367-593-1	FLYWHEEL (BF) ASSY	
210	3-908-605-01	SPRING (TRIGGER), TORSION	
211	3-908-609-01	GEAR, TRIGGER	
212	3-913-845-01	BELT (A)	
213	3-913-846-01	BELT (FR)	
214	X-3367-595-1	FLYWHEEL (BR) ASSY	
215	3-908-600-01	LEVER (REV-B)	
*216	1-650-669-11	LEAF SW BOARD	
217	3-908-598-01	CAM (B)	
218	X-3367-591-2	ARM (B) ASSY, FR	
219	3-911-114-01	SPRING (FR), TORSION	
220	3-908-604-01	LEVER (TRIGGER B)	
221	3-911-115-01	WASHER, STOPPER	
222	X-3367-587-1	CHASSIS ASSY, MECHANICAL	
*223	3-381-776-01	HOLDER (LED)	
224	3-917-176-01	BELT (B)	
225	X-3368-837-1	FLYWHEEL (AF) ASSY	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M2	X-3369-111-1	MOTOR ASSY (TRRIGER)	

5-6. CD MECHANISM SECTION-1
(CDM33-5BD3B)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BU-5BD3D
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#14
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#14
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not supplied
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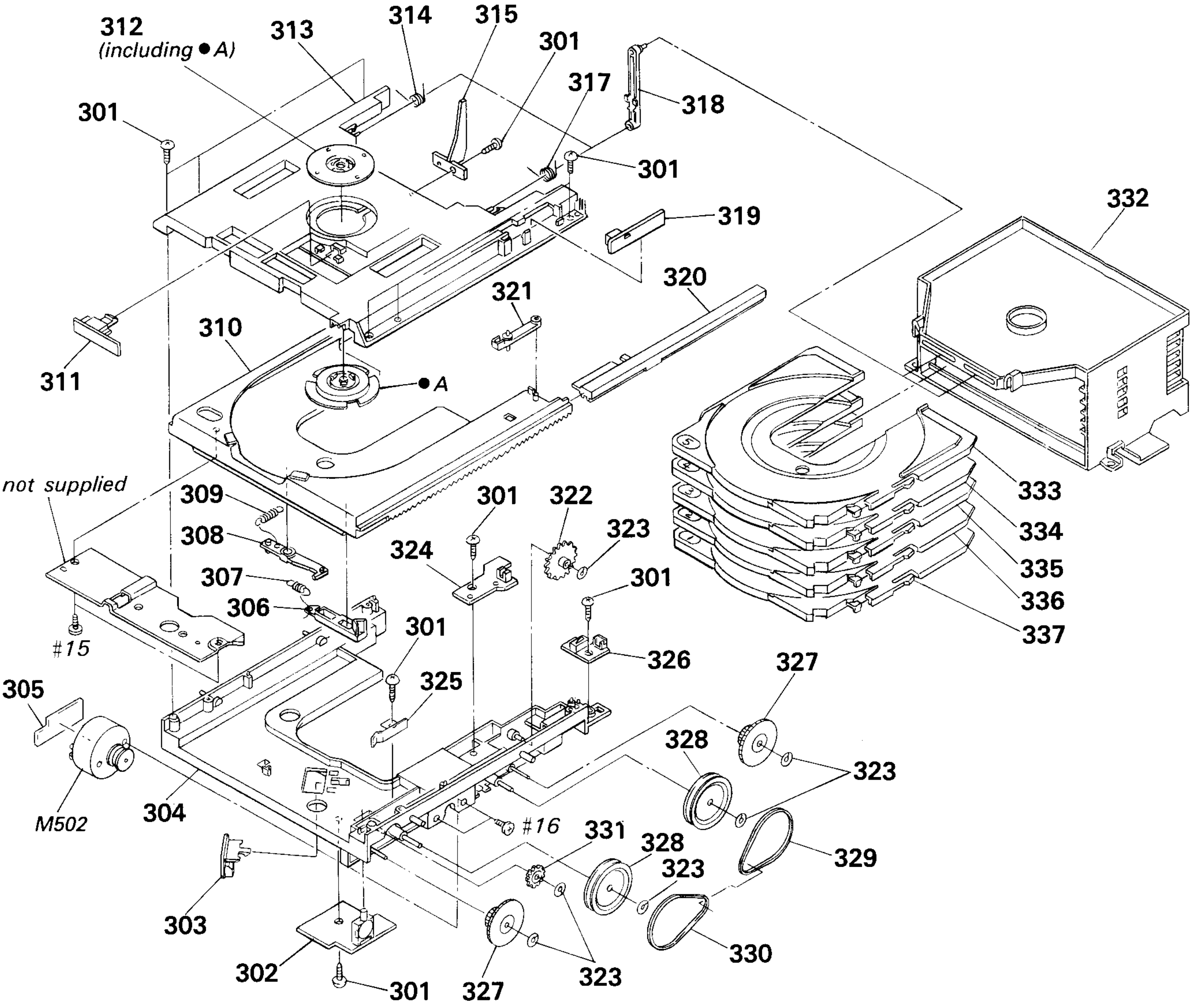
257

Ref.No.	Part No.	Description	Remark
*251	X-4944-558-1	CHASSIS ASSY, SUB	
252	3-383-699-01	CLAMP (EDGE)	
253	4-967-138-01	SPRING (BIAS), TENSION	
254	4-959-996-01	SPRING (932), COMPRESSION	
255	4-965-882-01	SPACER	
256	4-967-102-01	WASHER, STOPPER	
257	4-957-798-01	WASHER, STOPPER	
258	4-933-134-01	SCREW (+PTPWH M2.6X6)	
259	4-964-470-01	CAM (L), PLATE	
*260	X-4944-555-1	SLIDER ASSY (L)	
261	4-964-466-01	GEAR (JOINT)	
262	4-964-468-01	GEAR (CAM L)	
*263	1-651-396-11	U/D MOTOR BOARD	
264	4-962-113-01	CLAMP	
*265	1-651-397-11	COUNT SW BOARD	
*266	A-4369-799-A	CD BOARD, COMPLETE	
267	1-765-499-11	WIRE (FLAT TYPE) (22 CORE)	
268	4-964-467-01	GEAR (CAM R)	
269	4-964-487-01	PULLEY (U/D)	
270	4-964-477-01	BELT (U/D)	
271	4-964-469-01	CAM (R), PLATE	
*272	X-4944-554-1	SLIDER ASSY (R)	
*273	4-967-875-02	REINFORCEMENT (PLATE CAM)	
M501	A-4660-642-A	MOTOR (U/D) ASSY	

5-7. CD MECHANISM SECTION-2

(CDM33-5BD3B)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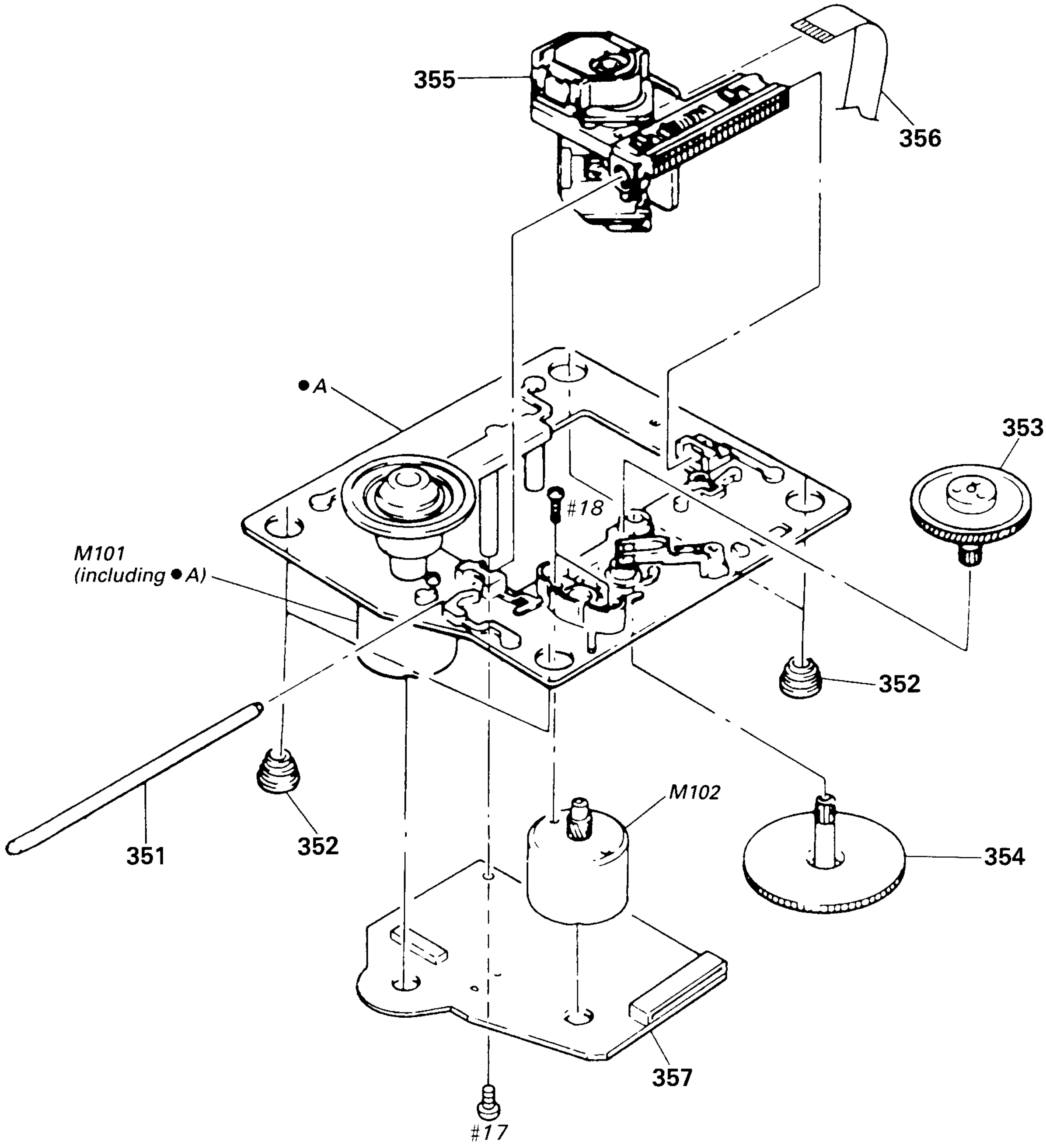
Ref.No.	Part No.	Description	Remark
301	4-951-620-01	SCREW (2.6X8), +BVTP	
*302	1-651-394-11	O/C SW BOARD	
*303	1-651-399-11	DISC SENS (B) BOARD	
304	X-4944-557-1	BASE (TRAY) ASSY, FITTING	
*305	1-651-391-11	TRAY MOTOR BOARD	
306	4-964-458-01	SLIDER (CLICK)	
307	4-964-481-01	SPRING (A), TENSION	
308	4-964-459-01	LEVER (STOPPER)	
309	4-964-482-01	SPRING (B), TENSION	
310	4-964-453-01	TRAY (MAIN)	
*311	1-651-398-11	DISC SENS (A) BOARD	
312	1-452-719-11	MAGNET ASSY	
313	4-964-492-01	BASE (MAGNET), FITTING	
314	4-964-485-01	SPRING (LEVER L), TORSION	
*315	4-965-895-01	STOPPER	
317	4-964-484-01	SPRING (LEVER R), TORSION	
*318	4-964-460-01	LEVER (STOCK)	
*319	1-651-392-11	MID SW BOARD	
320	4-964-455-01	SLIDER (SELECTION)	
321	X-4944-659-1	LEVER (GOOSENECK) ASSY	
322	4-964-463-01	GEAR (TRAY R)	
323	4-957-798-01	WASHER, STOPPER	
*324	1-651-393-11	INTERRUPTER BOARD	
325	4-967-196-01	SPRING (CLICK), LEAF	
*326	1-651-395-11	IN SW BOARD	
327	4-964-464-01	GEAR (DECELERATION)	
328	4-964-465-01	PULLEY (TRAY)	
329	4-964-476-01	BELT (R)	
330	4-964-475-01	BELT (F)	
331	4-964-462-01	GEAR (TRAY F)	
332	4-964-193-01	STOCKER	
333	X-4944-827-1	TRAY (SUB NO.5) ASSY	
334	X-4944-826-1	TRAY (SUB NO.4) ASSY	
335	X-4944-825-1	TRAY (SUB NO.3) ASSY	
336	X-4944-824-1	TRAY (SUB NO.2) ASSY	
337	X-4944-823-1	TRAY (SUB NO.1) ASSY	
M502	X-4944-463-1	MOTOR ASSY (TRAY)	

5-8. OPTICAL PICK-UP SECTION
(BU-5BD3B)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
351	4-917-565-01	SHAFT, SLED	
352	4-951-940-01	INSULATOR (BU)	
353	4-917-567-01	GEAR (M)	
354	4-917-564-01	GEAR (P), FLATNESS	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	

Ref.No.	Part No.	Description	Remark
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
*357	A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	MOTOR ASSY, DISK (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 6
ELECTRICAL PARTS LIST

AUDIO **MOTOR**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable

- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA··· : μA···, uPA··· : μPA···, uPB··· : μPB···,
  uPC··· : μPC···, uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviations

AUS : Australian	IT : Italian
CND : Canadian	JE : Tourist
EA : Saudi Arabia	MY : Malaysia
EE : East European	MX : Mexican
G : German	SP : Singapore

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les components identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			Remark
∗	A-2007-131-A	AUDIO BOARD, COMPLETE *********************			
		MOTOR BOARD ***********			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-124-443-00	ELECT	100uF	20%	10V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-124-282-00	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-124-234-00	ELECT	22uF	20%	16V
C331	1-136-434-11	FILM	120PF	5%	630V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-124-443-00	ELECT	100uF	20%	10V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-124-282-00	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-124-234-00	ELECT	22uF	20%	16V
C431	1-136-434-11	FILM	120PF	5%	630V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-126-157-11	ELECT	10uF	20%	16V
C602	1-126-157-11	ELECT	10uF	20%	16V
C611	1-126-157-11	ELECT	10uF	20%	16V
C612	1-126-157-11	ELECT	10uF	20%	16V
C621	1-136-601-11	FILM	0.01uF	5%	630V
C622	1-124-925-11	ELECT	2.2uF	20%	100V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-124-477-11	ELECT	47uF	20%	25V
C651	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
∗CN601	1-568-864-11	SOCKET, CONNECTOR 21P			
∗CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
∗CN651	1-564-521-11	PLUG, CONNECTOR 6P			
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IC601	8-759-111-44	IC	UPC4570C-1		
IC602	8-759-143-54	IC	UPC1330HA		
IC611	8-759-111-44	IC	UPC4570C-1		
		< COIL >			
L331	1-410-780-11	INDUCTOR	27mH		
L431	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q623	8-729-801-93	TRANSISTOR	2SD1387		
Q651	8-729-900-65	TRANSISTOR	DTA144ES		
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W

AUDIO MOTOR BD

Ref.No.	Part No.	Description			Remark
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W
R602	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-247-856-00	CARBON	11K	5%	1/4W
R652	1-247-856-00	CARBON	11K	5%	1/4W
R653	1-249-441-11	CARBON	100K	5%	1/4W

< VARIABLE RESISTOR >

Ref.No.	Part No.	Description
RV301	1-241-628-11	RES, ADJ, CARBON 2.2K
RV311	1-241-628-11	RES, ADJ, CARBON 2.2K
RV341	1-230-725-11	RES, ADJ, CARBON 220K
RV401	1-241-628-11	RES, ADJ, CARBON 2.2K
RV411	1-241-628-11	RES, ADJ, CARBON 2.2K
RV441	1-230-725-11	RES, ADJ, CARBON 220K
RV651	1-241-763-11	RES, ADJ, CARBON 4.7K
RV652	1-241-763-11	RES, ADJ, CARBON 4.7K

< TRANSFORMER >

Ref.No.	Part No.	Description
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION

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Ref.No.	Part No.	Description
*	A-4617-371-A	BD BOARD, COMPLETE

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< CAPACITOR >

Ref.No.	Part No.	Description			Remark
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-157-11	ELECT	10uF	20%	16V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

Ref.No.	Part No.	Description
CN101	1-568-796-11	SOCKET, CONNECTOR 22P
CN102	1-568-795-11	SOCKET, CONNECTOR 12P

< IC >

Ref.No.	Part No.	Description	
IC101	8-752-058-77	IC	CXA1372AQ
IC102	8-759-822-36	IC	LA6532M

< JUMPER RESISTOR >

Ref.No.	Part No.	Description			Remark
J101	1-216-295-91	METAL GLAZE	0	5%	1/10W
J102	1-216-295-91	METAL GLAZE	0	5%	1/10W

< TRANSISTOR >

Ref.No.	Part No.	Description	
Q101	8-729-901-01	TRANSISTOR	DTC144EK

< RESISTOR >

Ref.No.	Part No.	Description			Remark
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			Remark
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

< VARIABLE RESISTOR >

RV101	1-238-600-11	RES, ADJ, CARBON 10K
RV101	1-241-630-11	RES, ADJ, CARBON 10K
RV102	1-238-600-11	RES, ADJ, CARBON 10K
RV102	1-241-630-11	RES, ADJ, CARBON 10K

< SWITCH >

S101	1-572-085-11	SWITCH, LEAF

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* A-4369-799-A CD BOARD, COMPLETE

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< CAPACITOR >

Ref.No.	Part No.	Description			Remark
C111	1-124-604-00	ELECT	330uF	20%	10V
C111	1-124-472-11	ELECT	470uF	20%	10V
C112	1-164-159-11	CERAMIC	0.1uF		50V
C113	1-124-903-11	ELECT	1uF	20%	50V
C114	1-124-443-00	ELECT	100uF	20%	10V
C115	1-124-903-11	ELECT	1uF	20%	50V
C117	1-164-159-11	CERAMIC	0.1uF		50V
C118	1-124-443-00	ELECT	100uF	20%	10V
C121	1-164-159-11	CERAMIC	0.1uF		50V
C122	1-124-472-11	ELECT	470uF	20%	10V
C131	1-161-379-00	CERAMIC	0.01uF	20%	25V
C132	1-124-472-11	ELECT	470uF	20%	10V
C151	1-161-379-00	CERAMIC	0.01uF	20%	25V
C152	1-136-173-00	FILM	0.47uF	5%	50V
C153	1-161-379-00	CERAMIC	0.01uF	20%	25V
C154	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C155	1-136-161-00	FILM	0.047uF	5%	50V
C161	1-164-159-11	CERAMIC	0.1uF		50V
C170	1-164-159-11	CERAMIC	0.1uF		50V
C171	1-124-443-00	ELECT	100uF	20%	10V
C172	1-124-903-11	ELECT	1uF	20%	50V
C173	1-124-903-11	ELECT	1uF	20%	50V
C174	1-164-159-11	CERAMIC	0.1uF		50V
C175	1-124-604-00	ELECT	330uF	20%	10V
C176	1-164-159-11	CERAMIC	0.1uF		50V
C177	1-124-916-11	ELECT	22uF	20%	63V
C178	1-124-473-11	ELECT	1000uF	20%	10V
C201	1-136-165-00	FILM	0.1uF	5%	50V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-136-165-00	FILM	0.1uF	5%	50V
C204	1-124-443-00	ELECT	100uF	20%	10V
C206	1-124-443-00	ELECT	100uF	20%	10V
C207	1-136-165-00	FILM	0.1uF	5%	50V
C208	1-164-019-11	CERAMIC	10PF	0.5PF	50V
C209	1-164-019-11	CERAMIC	10PF	0.5PF	50V
C211	1-130-479-00	MYLAR	0.0047uF	5%	50V
C212	1-130-479-00	MYLAR	0.0047uF	5%	50V
C213	1-124-907-11	ELECT	10uF	20%	50V
C214	1-124-907-11	ELECT	10uF	20%	50V
C251	1-161-377-00	CERAMIC	0.0047uF	20%	16V
C252	1-161-379-00	CERAMIC	0.01uF	20%	25V

< CONNECTOR >

*CN101	1-764-108-11	CONNECTOR, FFC 22P
*CN102	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CN103	1-506-468-11	PIN, CONNECTOR 3P
*CN104	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
*CN105	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P
CN106	1-695-342-71	PIN, CONNECTOR (PC BOARD) 19P
*CN107	1-568-951-11	PIN, CONNECTOR 2P

< DIODE >

D102	8-719-109-98	DIODE	RD6.8ES-B3
D103	8-719-010-29	DIODE	UZ-4.3BSB
D104	8-719-987-63	DIODE	1N4148M
D107	8-719-010-41	DIODE	UZ-5.6BSA
D107	8-719-109-87	DIODE	RD5.6ES-B
D300	8-719-987-63	DIODE	1N4148M

< IC >

IC101	8-759-821-93	IC	LA5601
IC102	8-759-165-81	IC	PST600D-T
IC103	8-759-291-61	IC	uPD78054GC-025-3B9
IC104	8-759-277-68	IC	LB1648

CD **CD SW**

Ref.No.	Part No.	Description	Remark
IC106	8-759-277-67	IC TC9293N	
IC107	8-752-371-46	IC CXD2507Q	
IC108	8-759-232-07	IC TC74HC04AP	
IC109	8-759-821-93	IC LA5601	

< COIL >

Ref.No.	Part No.	Description	Remark
L300	1-410-525-11	INDUCTOR 220uH	
L301	1-410-525-11	INDUCTOR 220uH	

< TRANSISTOR >

Ref.No.	Part No.	Description	Remark
Q101	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q102	8-729-900-80	TRANSISTOR DTC114ES	
Q103	8-729-900-80	TRANSISTOR DTC114ES	

< RESISTOR >

Ref.No.	Part No.	Description	Remark
R106	1-249-429-11	CARBON 10K 5% 1/4W	
R107	1-249-429-11	CARBON 10K 5% 1/4W	
R108	1-249-429-11	CARBON 10K 5% 1/4W	
R109	1-249-429-11	CARBON 10K 5% 1/4W	
R110	1-249-429-11	CARBON 10K 5% 1/4W	
R111	1-249-425-11	CARBON 4.7K 5% 1/4W	
R112	1-249-425-11	CARBON 4.7K 5% 1/4W	
R113	1-249-425-11	CARBON 4.7K 5% 1/4W	
R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
R115	1-249-425-11	CARBON 4.7K 5% 1/4W	
R116	1-249-425-11	CARBON 4.7K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-429-11	CARBON 10K 5% 1/4W	
R119	1-249-429-11	CARBON 10K 5% 1/4W	
R120	1-249-429-11	CARBON 10K 5% 1/4W	
R121	1-247-807-31	CARBON 100 5% 1/4W	
R122	1-247-807-31	CARBON 100 5% 1/4W	
R123	1-247-807-31	CARBON 100 5% 1/4W	
R124	1-247-807-31	CARBON 100 5% 1/4W	
R125	1-247-807-31	CARBON 100 5% 1/4W	
R126	1-249-425-11	CARBON 4.7K 5% 1/4W	
R127	1-249-429-11	CARBON 10K 5% 1/4W	
R128	1-249-393-11	CARBON 10 5% 1/4W	
R129	1-249-423-11	CARBON 3.3K 5% 1/4W	
R130	1-249-423-11	CARBON 3.3K 5% 1/4W	
R131	1-249-423-11	CARBON 3.3K 5% 1/4W	
R132	1-249-423-11	CARBON 3.3K 5% 1/4W	
R133	1-249-429-11	CARBON 10K 5% 1/4W	
R134	1-249-429-11	CARBON 10K 5% 1/4W	
R135	1-247-807-31	CARBON 100 5% 1/4W	
R136	1-247-807-31	CARBON 100 5% 1/4W	
R137	1-247-807-31	CARBON 100 5% 1/4W	
R138	1-247-807-31	CARBON 100 5% 1/4W	
R139	1-249-412-11	CARBON 390 5% 1/4W	
R139	1-249-415-11	CARBON 680 5% 1/4W	
R141	1-249-417-11	CARBON 1K 5% 1/4W	
R143	1-247-896-11	CARBON 510K 5% 1/4W	
R145	1-249-423-11	CARBON 3.3K 5% 1/4W	
R147	1-249-423-11	CARBON 3.3K 5% 1/4W	
R148	1-249-413-11	CARBON 470 5% 1/4W	
R149	1-247-807-31	CARBON 100 5% 1/4W	
R151	1-249-418-11	CARBON 1.2K 5% 1/4W	
R152	1-249-418-11	CARBON 1.2K 5% 1/4W	
R153	1-249-441-11	CARBON 100K 5% 1/4W	
R154	1-249-429-11	CARBON 10K 5% 1/4W	
R155	1-249-423-11	CARBON 3.3K 5% 1/4W	
R156	1-249-423-11	CARBON 3.3K 5% 1/4W	
R157	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-409-11	CARBON 220 5% 1/4W	
R211	1-249-409-11	CARBON 220 5% 1/4W	
R212	1-249-409-11	CARBON 220 5% 1/4W	
R300	1-260-064-11	CARBON 1 5% 1/2W	
R301	1-249-421-11	CARBON 2.2K 5% 1/4W	
R302	1-249-421-11	CARBON 2.2K 5% 1/4W	
R303	1-249-430-11	CARBON 12K 5% 1/4W	
R304	1-249-430-11	CARBON 12K 5% 1/4W	
R305	1-249-429-11	CARBON 10K 5% 1/4W	
R306	1-249-417-11	CARBON 1K 5% 1/4W	
R307	1-249-425-11	CARBON 4.7K 5% 1/4W	
R309	1-260-064-11	CARBON 1 5% 1/2W	
R310	1-249-425-11	CARBON 4.7K 5% 1/4W	

< VIBRATOR >

Ref.No.	Part No.	Description	Remark
X101	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X201	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	

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* A-4369-797-A CD SW BOARD, COMPLETE

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< CONNECTOR >

Ref.No.	Part No.	Description	Remark
CN801	1-766-522-11	SOCKET, CONNECTOR 19P	

< DIODE >

Ref.No.	Part No.	Description	Remark
D801	8-719-301-43	LED SEL2410E-C-TP6 (DISC 1)	
D802	8-719-301-43	LED SEL2410E-C-TP6 (DISC 2)	
D803	8-719-301-43	LED SEL2410E-C-TP6 (DISC 3)	
D804	8-719-301-43	LED SEL2410E-C-TP6 (DISC 4)	
D805	8-719-301-43	LED SEL2410E-C-TP6 (DISC 5)	
D806	8-719-045-13	LED SEL2910A-TP6 (DISC 1)	
D807	8-719-045-13	LED SEL2910A-TP6 (DISC 2)	
D808	8-719-045-13	LED SEL2910A-TP6 (DISC 3)	
D809	8-719-045-13	LED SEL2910A-TP6 (DISC 4)	
D810	8-719-045-13	LED SEL2910A-TP6 (DISC 5)	

Ref.No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q801	8-729-602-36	TRANSISTOR 2SA1602-F	
Q802	8-729-602-36	TRANSISTOR 2SA1602-F	
Q803	8-729-602-21	TRANSISTOR 2SC4154-F	
Q804	8-729-602-21	TRANSISTOR 2SC4154-F	
Q805	8-729-602-21	TRANSISTOR 2SC4154-F	
Q806	8-729-602-21	TRANSISTOR 2SC4154-F	
Q807	8-729-602-21	TRANSISTOR 2SC4154-F	
		< RESISTOR >	
R801	1-216-041-00	METAL CHIP 470 5% 1/10W	
R802	1-216-041-00	METAL CHIP 470 5% 1/10W	
R803	1-216-041-00	METAL CHIP 470 5% 1/10W	
R804	1-216-045-00	METAL CHIP 680 5% 1/10W	
R805	1-216-045-00	METAL CHIP 680 5% 1/10W	
R806	1-216-045-00	METAL CHIP 680 5% 1/10W	
R807	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R808	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R809	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R810	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R811	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R812	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R813	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R814	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R815	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R816	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R817	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R818	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R819	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R820	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R821	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R831	1-216-037-00	METAL CHIP 330 5% 1/10W	
R832	1-216-029-00	METAL CHIP 150 5% 1/10W	
R833	1-216-029-00	METAL CHIP 150 5% 1/10W	
R834	1-216-029-00	METAL CHIP 150 5% 1/10W	
R835	1-216-037-00	METAL CHIP 330 5% 1/10W	
R836	1-216-037-00	METAL CHIP 330 5% 1/10W	
R837	1-216-029-00	METAL CHIP 150 5% 1/10W	
R838	1-216-029-00	METAL CHIP 150 5% 1/10W	
R839	1-216-029-00	METAL CHIP 150 5% 1/10W	
R840	1-216-037-00	METAL CHIP 330 5% 1/10W	
R841	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R842	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R843	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R844	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R845	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R846	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R847	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R848	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R849	1-216-073-00	METAL CHIP 10K 5% 1/10W	
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (⏭)	
S802	1-554-303-21	SWITCH, TACTILE (⏮)	
S803	1-554-303-21	SWITCH, TACTILE (■)	
S804	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S805	1-554-303-21	SWITCH, TACTILE (DISC 1 ⏏)	
S806	1-554-303-21	SWITCH, TACTILE (▶)	
S807	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S808	1-554-303-21	SWITCH, TACTILE (DISC 2 ⏏)	
S809	1-554-303-21	SWITCH, TACTILE (❚❚)	
S810	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S811	1-554-303-21	SWITCH, TACTILE (DISC 3 ⏏)	
S813	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S814	1-554-303-21	SWITCH, TACTILE (DISC 4 ⏏)	
S815	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S816	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S817	1-554-303-21	SWITCH, TACTILE (DISC 5 ⏏)	
S818	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S819	1-554-303-21	SWITCH, TACTILE (EDIT)	
S820	1-554-303-21	SWITCH, TACTILE (CHECK)	
S821	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S822	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S823	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S824	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S8001	1-572-126-11	SWITCH, PUSH (1 KEY) (PANEL SW)	

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Ref.No.	Part No.	Description	Remark
*	1-651-397-11	COUNT SW BOARD **************	
		< SWITCH >	
SW502	1-692-193-11	SWITCH, PUSH (1 KEY)	
SW503	1-572-126-11	SWITCH, PUSH (1 KEY)	

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Ref.No.	Part No.	Description	Remark
*	1-651-398-11	DISC SENS (A) BOARD ******************	
		< DIODE >	
D501	8-719-029-95	DIODE TLN117-B	

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Ref.No.	Part No.	Description	Remark
*	1-651-399-11	DISC SENS (B) BOARD ******************	
		< CONNECTOR >	
*CN510	1-568-941-11	PIN, CONNECTOR 3P	

DISC SENS (B) FL

Ref.No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q501	8-729-018-23	TRANSISTOR TPS626-B	
		< RESISTOR >	
R502	1-249-425-11	CARBON 4.7K 5% 1/4W	
**********	**********	**********************************	**********
*	A-4369-828-A	FL BOARD, COMPLETE (US,CND,MX)	
*	A-4369-829-A	FL BOARD, COMPLETE (E,AUS,EA,MY,SP,PX)	
*	A-4369-843-A	FL BOARD, COMPLETE (JE)	
*	A-4369-849-A	FL BOARD, COMPLETE (AEP,UK)	
*	A-4369-850-A	FL BOARD, COMPLETE (G)	
*	A-4369-851-A	FL BOARD, COMPLETE (IT)	
*	A-4369-852-A	FL BOARD, COMPLETE (CIS)	
*	A-4371-476-A	FL BOARD, COMPLETE (EE)	
		******************	
*	4-955-901-01	CUSHION (FL)	
*	4-959-227-01	HOLDER, LED	
		< CAPACITOR >	
C901	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C902	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C903	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C904	1-124-261-00	ELECT 10uF 20%	50V
C905	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C906	1-124-584-00	ELECT 100uF 20%	10V
C907	1-126-160-11	ELECT 1uF 20%	50V
C908	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C909	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C910	1-126-157-11	ELECT 10uF 20%	16V
C911	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C912	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C913	1-124-584-00	ELECT 100uF 20%	10V
C914	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C915	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C916	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C917	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C918	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C919	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C920	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C921	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C922	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C923	1-124-261-00	ELECT 10uF 20%	50V
C924	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C925	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C926	1-124-257-00	ELECT 2.2uF 20%	50V
C927	1-124-257-00	ELECT 2.2uF 20%	50V
C928	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C929	1-124-465-00	ELECT 0.47uF 20%	50V
C930	1-124-257-00	ELECT 2.2uF 20%	50V
C931	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C932	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C933	1-124-257-00	ELECT 2.2uF 20%	50V
C934	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C935	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C936	1-124-257-00	ELECT 2.2uF 20%	50V
C937	1-163-011-11	CERAMIC CHIP 0.0015uF 10%	50V
C938	1-124-257-00	ELECT 2.2uF 20%	50V
C939	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C940	1-163-235-11	CERAMIC CHIP 22PF 5%	50V
		< CONNECTOR >	
CN901	1-766-320-11	SOCKET, CONNECTOR 21P	
CN902	1-691-644-11	SOCKET, CONNECTOR 7P	
		< DIODE >	
D901	8-719-106-08	DIODE RD6.2M-B2	
D902	8-719-104-34	DIODE 1S2836	
D904	8-719-041-97	DIODE MA113-TX	
D905	8-719-041-97	DIODE MA113-TX	
D906	8-719-041-97	DIODE MA113-TX	
D907	8-719-106-08	DIODE RD6.2M-B2	
D908	8-719-990-39	DIODE DCB010	
D909	8-719-990-39	DIODE DCB010	
D910	8-719-990-39	DIODE DCB010	
D911	8-719-990-39	DIODE DCB010	
D912	8-719-990-39	DIODE DCB010	
D953	8-719-313-64	DIODE SEL3210S-CD (PRESET)	
		< FLUORESCENT INDICATOR TUBE >	
FL901	1-517-307-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC901	8-759-270-99	IC uPD78042GF-075-3B9	
IC902	8-759-504-12	IC X24C01S-TP	
IC904	8-749-923-64	IC NJM32H400	
IC905	8-759-167-83	IC PST600EMT-T1	
		< JUMPER RESISTOR >	
JW851	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JW852	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JW853	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JW9170	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JW9180	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JW9190	1-216-295-91	METAL GLAZE 0 5% 1/10W	

Ref.No.	Part No.	Description	Remark
		< COIL >	
L901	1-408-789-21	INDUCTOR CHIP 100uH	
L902	1-408-789-21	INDUCTOR CHIP 100uH	
		< TRANSISTOR >	
Q901	8-729-602-21	TRANSISTOR 2SC4154-F	
Q902	8-729-805-65	TRANSISTOR 2SA1344	
Q903	8-729-805-41	TRANSISTOR 2SC3398	
Q904	8-729-602-21	TRANSISTOR 2SC4154-F	
		< RESISTOR >	
R901	1-216-062-00	METAL CHIP 3.6K 5% 1/10W	(US,CND,MX)
R901	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(E,AUS,EA,MY,SP,PX,JE)
R901	1-216-295-91	METAL GLAZE 0 5% 1/10W	(AEP,UK,EE)
R901	1-216-041-00	METAL CHIP 470 5% 1/10W	(G)
R901	1-216-050-00	METAL GLAZE 1.1K 5% 1/10W	(IT)
R901	1-216-081-00	METAL CHIP 22K 5% 1/10W	(CIS)
R902	1-216-025-00	METAL CHIP 100 5% 1/10W	
R903	1-216-025-00	METAL CHIP 100 5% 1/10W	
R904	1-216-025-00	METAL CHIP 100 5% 1/10W	
R905	1-216-025-00	METAL CHIP 100 5% 1/10W	
R906	1-216-025-00	METAL CHIP 100 5% 1/10W	
R907	1-216-025-00	METAL CHIP 100 5% 1/10W	
R908	1-216-025-00	METAL CHIP 100 5% 1/10W	
R909	1-216-025-00	METAL CHIP 100 5% 1/10W	
R910	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R911	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R912	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R913	1-216-025-00	METAL CHIP 100 5% 1/10W	
R914	1-216-025-00	METAL CHIP 100 5% 1/10W	
R915	1-216-025-00	METAL CHIP 100 5% 1/10W	
R916	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R917	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R918	1-216-025-00	METAL CHIP 100 5% 1/10W	
R919	1-216-025-00	METAL CHIP 100 5% 1/10W	
R920	1-216-025-00	METAL CHIP 100 5% 1/10W	
R921	1-216-025-00	METAL CHIP 100 5% 1/10W	
R922	1-216-025-00	METAL CHIP 100 5% 1/10W	
R923	1-216-025-00	METAL CHIP 100 5% 1/10W	
R924	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R925	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R926	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R927	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R928	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R929	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R930	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R931	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R932	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R933	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R934	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R935	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R936	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R937	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R938	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R939	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R940	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R941	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R942	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R943	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R944	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R947	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R948	1-216-025-00	METAL CHIP 100 5% 1/10W	
R949	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R950	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R951	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R952	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R953	1-216-037-00	METAL CHIP 330 5% 1/10W	
R954	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R955	1-216-025-00	METAL CHIP 100 5% 1/10W	
R956	1-216-027-00	METAL CHIP 120 5% 1/10W	
R957	1-216-027-00	METAL CHIP 120 5% 1/10W	
R958	1-216-029-00	METAL CHIP 150 5% 1/10W	
R970	1-216-025-00	METAL CHIP 100 5% 1/10W	
R971	1-216-027-00	METAL CHIP 120 5% 1/10W	
R972	1-216-027-00	METAL CHIP 120 5% 1/10W	
R973	1-216-029-00	METAL CHIP 150 5% 1/10W	
R974	1-216-031-00	METAL CHIP 180 5% 1/10W	
R975	1-216-033-00	METAL CHIP 220 5% 1/10W	
R976	1-216-035-00	METAL CHIP 270 5% 1/10W	
R980	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R981	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R982	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R983	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R985	1-216-044-00	METAL CHIP 620 5% 1/10W	
R986	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R987	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R988	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R989	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R990	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R991	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R992	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R993	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R994	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R995	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R996	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R997	1-216-072-00	METAL CHIP 9.1K 5% 1/10W	

Ref.No.	Part No.	Description	Remark
R998	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R999	1-216-025-00	METAL CHIP 100 5% 1/10W	
R1000	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< SWITCH >	
S901	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S903	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S904	1-554-303-21	SWITCH, TACTILE (DAILY)	
S905	1-554-303-21	SWITCH, TACTILE (REC TIMER)	
S906	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S913	1-554-303-21	SWITCH, TACTILE (EQ PRESET)	
S914	1-554-303-21	SWITCH, TACTILE (MEMORY/NEXT)	
S915	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
S916	1-554-303-21	SWITCH, TACTILE (TUNER BAND)	
S917	1-554-303-21	SWITCH, TACTILE (PRESET/TUNING)	
S918	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER +)	
S919	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER -)	
		< VIBRATOR >	
X901	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
X902	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	

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*	1-652-281-11	HP BOARD ********	
		< CAPACITOR >	
C501	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C502	1-165-319-11	CERAMIC CHIP 0.1uF 50V	
C551	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C552	1-165-319-11	CERAMIC CHIP 0.1uF 50V	
		< JACK >	
J501	1-766-318-11	JACK (HEADPHONES)	

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*	1-651-395-11	IN SW BOARD ***********	
		< CONNECTOR >	
*CN502	1-568-951-11	PIN, CONNECTOR 2P	
		< SWITCH >	
SW501	1-692-193-11	SWITCH, PUSH (1 KEY)	

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Ref.No.	Part No.	Description	Remark
*	1-651-393-11	INTERRUPTER BOARD *****************	
	4-964-461-01	HOLDER (SENSOR)	
		< IC >	
IC501	8-729-020-74	IC GP1S24	

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*	1-650-669-11	LEAF SW BOARD *************	
*	3-381-776-01	HOLDER (LED)	
		< CONNECTOR >	
*CN1001	1-568-854-11	SOCKET, CONNECTOR 11P	
		< TRANSISTOR >	
Q1001	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A	
Q1002	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A	
		< RESISTOR >	
R1001	1-249-412-11	CARBON 390 5% 1/4W	
R1002	1-249-412-11	CARBON 390 5% 1/4W	
R1003	1-249-414-11	CARBON 560 5% 1/4W	
R1004	1-247-834-11	CARBON 1.3K 5% 1/4W	
R1005	1-247-818-11	CARBON 300 5% 1/4W	
		< SWITCH >	
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)	
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)	
S1004	1-571-281-21	SWITCH, LEAF (A CrO2)	
S1005	1-571-281-21	SWITCH, LEAF (REC A)	
S1006	1-572-248-11	SWITCH, LEAF (B HALF)	
S1007	1-572-248-11	SWITCH, LEAF (B METAL)	
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)	
S1009	1-571-281-21	SWITCH, LEAF (REC B)	

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*	A-4369-820-A	MAIN BOARD, COMPLETE	(US,CND,MX)
*	A-4369-821-A	MAIN BOARD, COMPLETE	(E,AUS,EA,MY,SP,PX,JE)
*	A-4369-846-A	MAIN BOARD, COMPLETE	(AEP,UK)
*	A-4369-847-A	MAIN BOARD, COMPLETE	(G,IT)
*	A-4371-475-A	MAIN BOARD, COMPLETE	(EE)
*	A-4371-477-A	MAIN BOARD, COMPLETE *******************	(CIS)
	1-533-293-11	FUSE HOLDER	
*	4-886-555-00	HEAT SINK	
*	4-942-204-01	PLATE, GROUND	
	7-685-646-81	SCREW +BVTP 3X8 TYPE2	

Ref.No.	Part No.	Description	Remark
		< INDUCTOR >	
B242	1-412-473-21	INDUCTOR (SMALL TYPE)	(E,EA,MY,SP,AUS,PX,JE)
		< CAPACITOR >	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	(AEP,UK,G,IT,EE,CIS)
C102	1-162-282-31	CERAMIC 100PF 10% 50V	(AEP,UK,G,IT,EE,CIS)
C103	1-162-219-31	CERAMIC 68PF 5% 50V	(AEP,UK,G,IT,EE,CIS)
C104	1-124-927-11	ELECT 4.7uF 20% 100V	(AEP,UK,G,IT,EE,CIS)
C105	1-161-374-11	CERAMIC 0.0015uF 20% 50V	(AEP,UK,G,IT,EE,CIS)
C106	1-161-377-00	CERAMIC 0.0047uF 30% 16V	(AEP,UK,G,IT,EE,CIS)
C107	1-136-171-00	FILM 0.33uF 5% 50V	(AEP,UK,G,IT,EE,CIS)
C108	1-124-443-00	ELECT 100uF 20% 10V	(AEP,UK,G,IT,EE,CIS)
C109	1-124-927-11	ELECT 4.7uF 20% 100V	
C113	1-124-925-11	ELECT 2.2uF 20% 100V	
C116	1-124-925-11	ELECT 2.2uF 20% 100V	
C117	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C118	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C119	1-162-282-31	CERAMIC 100PF 10% 50V	
C120	1-162-282-31	CERAMIC 100PF 10% 50V	
C121	1-124-464-11	ELECT 0.22uF 20% 50V	
C122	1-124-464-11	ELECT 0.22uF 20% 50V	
C133	1-130-488-00	MYLAR 0.027uF 5% 50V	
C134	1-130-488-00	MYLAR 0.027uF 5% 50V	
C136	1-162-282-31	CERAMIC 100PF 10% 50V	
C139	1-162-286-31	CERAMIC 220PF 10% 50V	(G,IT)
C140	1-162-286-31	CERAMIC 220PF 10% 50V	(G,IT)
C142	1-161-327-00	CERAMIC 0.0033uF 20% 16V	
C143	1-161-327-00	CERAMIC 0.0033uF 20% 16V	
C144	1-161-046-00	CERAMIC 0.0039uF 10% 50V	(CIS)
C145	1-161-046-00	CERAMIC 0.0039uF 10% 50V	(CIS)
C149	1-124-477-11	ELECT 47uF 20% 25V	
C150	1-124-927-11	ELECT 4.7uF 20% 100V	
C151	1-124-925-11	ELECT 2.2uF 20% 100V	(AEP,UK,G,IT,EE,CIS)
C152	1-162-282-31	CERAMIC 100PF 10% 50V	(AEP,UK,G,IT,EE,CIS)
C153	1-162-219-31	CERAMIC 68PF 5% 50V	(AEP,UK,G,IT,EE,CIS)
C154	1-124-927-11	ELECT 4.7uF 20% 100V	(AEP,UK,G,IT,EE,CIS)

Ref.No.	Part No.	Description	Remark
C155	1-161-374-11	CERAMIC 0.0015uF 20% 50V	(AEP,UK,G,IT,EE,CIS)
C156	1-161-377-00	CERAMIC 0.0047uF 30% 16V	(AEP,UK,G,IT,EE,CIS)
C157	1-136-171-00	FILM 0.33uF 5% 50V	(AEP,UK,G,IT,EE,CIS)
C158	1-124-443-00	ELECT 100uF 20% 10V	(AEP,UK,G,IT,EE,CIS)
C159	1-124-927-11	ELECT 4.7uF 20% 100V	
C163	1-164-159-11	CERAMIC 0.1uF 50V	
C166	1-130-490-11	MYLAR 0.039uF 5% 50V	
C167	1-130-490-11	MYLAR 0.039uF 5% 50V	
C168	1-106-353-00	MYLAR 0.0027uF 5% 50V	
C169	1-106-353-00	MYLAR 0.0027uF 5% 50V	
C170	1-162-293-31	CERAMIC 820PF 10% 50V	
C171	1-162-293-31	CERAMIC 820PF 10% 50V	
C172	1-124-477-11	ELECT 47uF 20% 25V	
C173	1-124-477-11	ELECT 47uF 20% 25V	
C186	1-162-282-31	CERAMIC 100PF 10% 50V	
C190	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C191	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C199	1-164-159-11	CERAMIC 0.1uF 50V	(EXCEPT AEP,UK,G,IT,EE,CIS)
C201	1-162-290-31	CERAMIC 470PF 10% 50V	
C202	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C203	1-162-290-31	CERAMIC 470PF 10% 50V	
C701	1-124-604-00	ELECT 330uF 20% 10V	
C702	1-126-927-11	ELECT 2200uF 20% 10V	
C703	1-126-927-11	ELECT 2200uF 20% 10V	
C704	1-124-925-11	ELECT 2.2uF 20% 100V	
C705	1-124-927-11	ELECT 4.7uF 20% 100V	
C706	1-164-159-11	CERAMIC 0.1uF 50V	
C707	1-124-442-00	ELECT 330uF 20% 6.3V	
C708	1-124-902-00	ELECT 0.47uF 20% 50V	
C709	1-161-494-00	CERAMIC 0.022uF 25V	
C710	1-124-907-11	ELECT 10uF 20% 50V	
C711	1-124-477-11	ELECT 47uF 20% 25V	
C712	1-124-477-11	ELECT 47uF 20% 25V	
		< CONNECTOR >	
CN101	1-691-650-11	SOCKET, CONNECTOR 19P	
CN102	1-766-321-11	SOCKET, CONNECTOR 21P	
CN104	1-691-648-11	SOCKET, CONNECTOR 15P	
CN105	1-569-493-11	SOCKET, CONNECTOR 7P	
*CN106	1-565-561-11	PIN, CONNECTOR 3P	
*CN111	1-568-832-11	SOCKET, CONNECTOR (CIS)	
*CN801	1-569-502-11	PIN, CONNECTOR 7P	
CN802	1-564-506-11	PLUG, CONNECTOR 3P	

MAIN

Ref.No.	Part No.	Description	Remark
		< DIODE >	
D101	8-719-987-63	DIODE 1N4148M	
D102	8-719-000-60	DIODE UZL-6M2	
D703	8-719-987-63	DIODE 1N4148M	
D706	8-719-200-82	DIODE 11ES2	
D707	8-719-001-51	DIODE UZL-11H1	
D708	8-719-002-33	DIODE UZL-24L	
		< FUSE >	
⚠F701	1-532-776-21	FUSE, MICRO (SECONDARY) (1A/125V)	(US,CND,MX)
⚠F702	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A/125V)	(US,CND,MX)
		< IC LINK >	
⚠F701	1-532-839-11	LINK, IC (1A/125V)	(EXCEPT US,CND,MX)
⚠F702	1-532-840-21	LINK, IC (1.25A/125V)	(EXCEPT US,CND,MX)
		< IC >	
IC101	8-759-634-50	IC M5218AL	(AEP,UK,G,IT,EE,CIS)
IC102	8-759-000-48	IC MC14052BCP	
IC103	8-759-000-48	IC MC14052BCP	
IC104	8-759-634-50	IC M5218AL	
IC106	8-759-635-31	IC M50253P	
IC112	8-759-634-50	IC M5218AL	
IC701	8-759-602-66	IC M5230L-A	
IC702	8-759-231-53	IC TA7805S	
		< JACK >	
J101	1-569-181-11	JACK, PIN 2P (PHONO)(AEP,UK,G,IT,EE,CIS) (MD/VIDEO)(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)	
		< LOW PASS FILTER >	
L101	1-239-597-11	FILTER, LOW PASS	(CIS)
L102	1-239-597-11	FILTER, LOW PASS	(CIS)
		< TRANSISTOR >	
Q105	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q106	8-729-900-63	TRANSISTOR DTA124ES	
Q107	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q108	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q110	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q111	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q112	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q113	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q114	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q115	8-729-620-05	TRANSISTOR 2SC2603-EF	

Ref.No.	Part No.	Description	Remark
Q155	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-209-15	TRANSISTOR 2SD2012	
Q705	8-729-900-36	TRANSISTOR DTC124ES	
Q706	8-729-900-36	TRANSISTOR DTC124ES	
Q707	8-729-900-89	TRANSISTOR DTC144ES	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R102	1-249-417-11	CARBON 1K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R103	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK,EE,CIS)
R104	1-247-897-11	CARBON 560K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R105	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R106	1-247-897-11	CARBON 560K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R107	1-249-416-11	CARBON 820 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R108	1-249-413-11	CARBON 470 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R109	1-249-409-11	CARBON 220 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R110	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP,UK,EE,CIS)
R111	1-249-416-11	CARBON 820 5% 1/4W	(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)
R112	1-249-416-11	CARBON 820 5% 1/4W	(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)
R126	1-249-417-11	CARBON 1K 5% 1/4W	
R127	1-249-433-11	CARBON 22K 5% 1/4W	
R128	1-249-441-11	CARBON 100K 5% 1/4W	
R129	1-249-441-11	CARBON 100K 5% 1/4W	
R130	1-249-417-11	CARBON 1K 5% 1/4W	
R131	1-249-433-11	CARBON 22K 5% 1/4W	
R134	1-249-421-11	CARBON 2.2K 5% 1/4W	
R135	1-249-441-11	CARBON 100K 5% 1/4W	
R136	1-249-417-11	CARBON 1K 5% 1/4W	
R137	1-249-437-11	CARBON 47K 5% 1/4W	
R138	1-249-429-11	CARBON 10K 5% 1/4W	
R139	1-249-429-11	CARBON 10K 5% 1/4W	
R142	1-249-417-11	CARBON 1K 5% 1/4W	
R146	1-249-425-11	CARBON 4.7K 5% 1/4W	
R147	1-260-096-11	CARBON 560 5% 1/2W	
R148	1-260-096-11	CARBON 560 5% 1/2W	
R151	1-249-417-11	CARBON 1K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R152	1-249-417-11	CARBON 1K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R153	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK,EE,CIS)
R154	1-247-897-11	CARBON 560K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R155	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R156	1-247-897-11	CARBON 560K 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R157	1-249-416-11	CARBON 820 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R158	1-249-413-11	CARBON 470 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R159	1-249-409-11	CARBON 220 5% 1/4W	(AEP,UK,G,IT,EE,CIS)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
R160	1-249-429-11	CARBON 10K 5% 1/4W	(AEP,UK,EE,CIS)
R161	1-249-425-11	CARBON 4.7K 5% 1/4W	(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)
R162	1-249-416-11	CARBON 820 5% 1/4W	(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)
R174	1-249-431-11	CARBON 15K 5% 1/4W	
R175	1-249-431-11	CARBON 15K 5% 1/4W	
R176	1-247-874-11	CARBON 62K 5% 1/4W	
R177	1-247-862-11	CARBON 20K 5% 1/4W	
R178	1-247-874-11	CARBON 62K 5% 1/4W	
R179	1-247-862-11	CARBON 20K 5% 1/4W	
R180	1-247-862-11	CARBON 20K 5% 1/4W	
R181	1-247-862-11	CARBON 20K 5% 1/4W	
R184	1-249-421-11	CARBON 2.2K 5% 1/4W	
R185	1-249-433-11	CARBON 22K 5% 1/4W	
R186	1-249-441-11	CARBON 100K 5% 1/4W	
R187	1-249-441-11	CARBON 100K 5% 1/4W	
R189	1-249-417-11	CARBON 1K 5% 1/4W	
R190	1-249-417-11	CARBON 1K 5% 1/4W	
R192	1-249-417-11	CARBON 1K 5% 1/4W	
R206	1-249-412-11	CARBON 390 5% 1/4W	
R207	1-249-412-11	CARBON 390 5% 1/4W	
R208	1-249-412-11	CARBON 390 5% 1/4W	
R209	1-249-412-11	CARBON 390 5% 1/4W	
R210	1-249-412-11	CARBON 390 5% 1/4W	
R211	1-249-412-11	CARBON 390 5% 1/4W	
R212	1-249-423-11	CARBON 3.3K 5% 1/4W	
R213	1-249-423-11	CARBON 3.3K 5% 1/4W	
R214	1-249-420-11	CARBON 1.8K 5% 1/4W	
R215	1-249-420-11	CARBON 1.8K 5% 1/4W	
R216	1-249-417-11	CARBON 1K 5% 1/4W	
R217	1-249-417-11	CARBON 1K 5% 1/4W	
R218	1-249-440-11	CARBON 82K 5% 1/4W	
R219	1-249-440-11	CARBON 82K 5% 1/4W	
R220	1-249-440-11	CARBON 82K 5% 1/4W	
R221	1-249-440-11	CARBON 82K 5% 1/4W	
R222	1-249-437-11	CARBON 47K 5% 1/4W	
R223	1-249-437-11	CARBON 47K 5% 1/4W	
R224	1-249-427-11	CARBON 6.8K 5% 1/4W	
R225	1-249-427-11	CARBON 6.8K 5% 1/4W	
R226	1-249-427-11	CARBON 6.8K 5% 1/4W	
R227	1-249-427-11	CARBON 6.8K 5% 1/4W	
R228	1-249-427-11	CARBON 6.8K 5% 1/4W	
R229	1-249-427-11	CARBON 6.8K 5% 1/4W	
R231	1-249-433-11	CARBON (SMALL) 22K 5% 1/4W	(CIS)
R232	1-249-421-11	CARBON (SMALL) 2.2K 5% 1/4W	(CIS)
R233	1-249-425-11	CARBON (SMALL) 4.7K 5% 1/4W	(CIS)
R234	1-249-421-11	CARBON (SMALL) 2.2K 5% 1/4W	(CIS)
R235	1-249-425-11	CARBON (SMALL) 4.7K 5% 1/4W	(CIS)

Ref.No.	Part No.	Description	Remark
R253	1-249-415-11	CARBON 680 5% 1/4W	
R255	1-249-415-11	CARBON 680 5% 1/4W	
R401	1-249-417-11	CARBON 1K 5% 1/4W	
R402	1-249-417-11	CARBON 1K 5% 1/4W	
R403	1-249-429-11	CARBON 10K 5% 1/4W	
R405	1-249-429-11	CARBON 10K 5% 1/4W	
R702	1-249-429-11	CARBON 10K 5% 1/4W	
R703	1-249-431-11	CARBON 15K 5% 1/4W	
R704	1-249-423-11	CARBON 3.3K 5% 1/4W	
R705	1-249-414-11	CARBON 560 5% 1/4W	
R706	1-249-414-11	CARBON 560 5% 1/4W	
R707	1-249-409-11	CARBON 220 5% 1/4W	
R708	1-249-431-11	CARBON 15K 5% 1/4W	
R709	1-249-429-11	CARBON 10K 5% 1/4W	
R710	1-249-409-11	CARBON 220 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	
R715	1-249-441-11	CARBON 100K 5% 1/4W	
R717	1-249-415-11	CARBON 680 5% 1/4W	
R718	1-249-415-11	CARBON 680 5% 1/4W	(AEP,UK,G,IT,EE,CIS)
R949	1-247-883-00	CARBON 150K 5% 1/4W	
R950	1-249-429-11	CARBON 10K 5% 1/4W	

< TERMINAL >

Ref.No.	Part No.	Description	Remark
TM101	1-537-238-21	TERMINAL BOARD (ANTENNA)	(US,CND,E,AUS,EA,MX,MY,SP,PX,JE)
TM101	1-537-488-11	TERMINAL BOARD (ANTENNA)	(AEP,UK,G,IT,EE,CIS)

< TEST POINT >

Ref.No.	Part No.	Description	Remark
*TP401	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	

****

Ref.No.	Part No.	Description	Remark
*	1-651-392-11	MID SW BOARD ************	

< CONNECTOR >

Ref.No.	Part No.	Description	Remark
CN503	1-506-481-11	PIN, CONNECTOR 2P	

< SWITCH >

Ref.No.	Part No.	Description	Remark
SW504	1-692-193-11	SWITCH, PUSH (1 KEY)	

****

Ref.No.	Part No.	Description	Remark
*	1-651-394-11	O/C SW BOARD ************	

< CONNECTOR >

Ref.No.	Part No.	Description	Remark
CN512	1-506-481-11	PIN, CONNECTOR 2P	
*CN514	1-568-941-11	PIN, CONNECTOR 3P	

O/C SW POLAR

Ref.No.	Part No.	Description				Remark
		< RESISTOR >				
R503	1-247-818-11	CARBON	300	5%	1/4W	
R504	1-249-431-11	CARBON	15K	5%	1/4W	
		< SWITCH >				
SW505	1-571-300-21	SWITCH, ROTARY				

****

Ref.No.	Part No.	Description				Remark
*	A-4371-478-A	POLAR BOARD, COMPLETE (CIS)				
		*********************				
		< CAPACITOR >				
C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1702	1-130-014-00	FILM	470PF	5%	50V	
C1703	1-124-902-00	ELECT	0.47uF	20%	50V	
C1704	1-124-902-00	ELECT	0.47uF	20%	50V	
C1705	1-164-098-11	CERAMIC	0.047uF		12V	
C1706	1-124-903-11	ELECT	1uF	20%	50V	
C1707	1-162-288-31	CERAMIC	330PF	10%	50V	
C1708	1-124-903-11	ELECT	1uF	20%	50V	
C1709	1-124-903-11	ELECT	1uF	20%	50V	
C1710	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1710	1-137-364-11	FILM	0.001uF	5%	50V	
C1711	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1711	1-137-364-11	FILM	0.001uF	5%	50V	
C1712	1-130-736-11	FILM	0.01uF	5%	50V	
C1713	1-130-736-11	FILM	0.01uF	5%	50V	
C1714	1-124-903-11	ELECT	1uF	20%	50V	
C1715	1-124-903-11	ELECT	1uF	20%	50V	
C1716	1-124-903-11	ELECT	1uF	20%	50V	
C1717	1-162-291-31	CERAMIC	560PF	10%	50V	
C1718	1-162-291-31	CERAMIC	560PF	10%	50V	
C1719	1-124-477-11	ELECT	47uF	20%	25V	
C1720	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1721	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1722	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1723	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1724	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1725	1-124-477-11	ELECT	47uF	20%	25V	
C1726	1-124-903-11	ELECT	1uF	20%	50V	
C1727	1-124-903-11	ELECT	1uF	20%	50V	
C1728	1-104-792-51	ELECT	33uF	20%	16V	
C1729	1-124-907-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
*CN1701	1-568-832-11	SOCKET, CONNECTOR 13P				

Ref.No.	Part No.	Description				Remark
		< TRIMMER >				
CT1701	1-141-260-00	CAP, TRIMMER	50PF			
		< DIODE >				
D1701	8-719-987-63	DIODE	1N4148M			
D1702	8-719-987-63	DIODE	1N4148M			
D1703	8-719-987-63	DIODE	1N4148M			
D1704	8-719-987-63	DIODE	1N4148M			
D1705	8-719-987-63	DIODE	1N4148M			
		< IC >				
IC1701	8-759-063-04	IC	IR3R42			
IC1702	8-759-634-51	IC	M5218AP			
IC1703	8-759-140-53	IC	UPD4053BC			
		< COIL >				
L1701	1-409-497-11	COIL (FILTER)				
		< TRANSISTOR >				
Q1701	8-729-900-61	TRANSISTOR	DTA114ES			
Q1702	8-729-900-80	TRANSISTOR	DTC114ES			
Q1703	8-729-900-80	TRANSISTOR	DTC114ES			
Q1704	8-729-900-80	TRANSISTOR	DTC114ES			
Q1705	8-729-900-61	TRANSISTOR	DTA114ES			
		< RESISTOR >				
R1701	1-249-433-11	CARBON	22K	5%	1/4W	
R1702	1-249-435-11	CARBON	33K	5%	1/4W	
R1703	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1704	1-247-858-11	CARBON	13K	5%	1/4W	
R1705	1-249-417-11	CARBON	1K	5%	1/4W	
R1706	1-249-417-11	CARBON	1K	5%	1/4W	
R1707	1-249-441-11	CARBON	100K	5%	1/4W	
R1708	1-249-440-11	CARBON	82K	5%	1/4W	
R1709	1-249-439-11	CARBON	68K	5%	1/4W	
R1710	1-249-439-11	CARBON	68K	5%	1/4W	
R1711	1-249-439-11	CARBON	68K	5%	1/4W	
R1712	1-247-878-00	CARBON	91K	5%	1/4W	
R1713	1-247-878-00	CARBON	91K	5%	1/4W	
R1714	1-249-441-11	CARBON	100K	5%	1/4W	
R1715	1-249-441-11	CARBON	100K	5%	1/4W	
R1716	1-249-441-11	CARBON	100K	5%	1/4W	
R1717	1-249-441-11	CARBON	100K	5%	1/4W	
R1718	1-249-429-11	CARBON	10K	5%	1/4W	
R1719	1-249-429-11	CARBON	10K	5%	1/4W	
R1720	1-249-429-11	CARBON	10K	5%	1/4W	
R1721	1-249-434-11	CARBON	27K	5%	1/4W	
R1722	1-249-441-11	CARBON	100K	5%	1/4W	

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV1701	1-238-600-11	RES, ADJ, CARBON 10K	
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K	
		< TEST PIN >	
*TP1701	1-560-061-00	PIN, CONNECTOR 3P	
*TP1702	1-560-061-00	PIN, CONNECTOR 3P	

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Ref.No.	Part No.	Description	Remark
*	A-4369-822-A	POWER BOARD, COMPLETE (US,CND,MX)	
*	A-4371-819-A	POWER BOARD, COMPLETE (G,IT)	
*	A-4369-826-A	POWER BOARD, COMPLETE (EXCEPT US,CND,MX)	

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Ref.No.	Part No.	Description				Remark
		< CAPACITOR >				
C901	1-124-903-11	ELECT	1uF	20%	50V	
C902	1-162-282-31	CERAMIC	100PF	10%	50V	
C903	1-162-282-31	CERAMIC	100PF	10%	50V	
C904	1-124-477-11	ELECT	47uF	20%	25V	
C905	1-124-910-11	ELECT	47uF	20%	50V	
C906	1-124-910-11	ELECT	47uF	20%	50V	
C907	1-124-910-11	ELECT	47uF	20%	50V	
C908	1-124-910-11	ELECT	47uF	20%	50V	
C909	1-124-910-11	ELECT	47uF	20%	50V	
C910	1-136-165-00	FILM	0.1uF	5%	50V	
C911	1-136-165-00	FILM	0.1uF	5%	50V	
C912	1-124-907-11	ELECT	10uF	20%	50V	
C913	1-124-902-00	ELECT	0.47uF	20%	50V	
C914	1-124-910-11	ELECT	47uF	20%	50V	
C916	1-126-176-11	ELECT	220uF	20%	10V	
C920	1-124-564-11	ELECT	4700uF	20%	25V	
C922	1-136-165-00	FILM	0.1uF	5%	50V	
C923	1-136-165-00	FILM	0.1uF	5%	50V	
C927	1-126-224-11	ELECT	4700uF	20%	42V	
C928	1-126-224-11	ELECT	4700uF	20%	42V	
C929	1-124-907-11	ELECT	10uF	20%	50V	
C930	1-124-929-11	ELECT	22uF	20%	100V	
C931	1-124-916-11	ELECT	22uF	20%	63V	
C932	1-136-165-00	FILM	0.1uF	5%	50V	
C933	1-136-165-00	FILM	0.1uF	5%	50V	
C935	1-124-910-11	ELECT	47uF	20%	50V	
C951	1-124-903-11	ELECT	1uF	20%	50V	
C952	1-162-282-31	CERAMIC	100PF	10%	50V	
C953	1-162-282-31	CERAMIC	100PF	10%	50V	
C955	1-124-910-11	ELECT	47uF	20%	50V	
C960	1-136-165-00	FILM	0.1uF	5%	50V	
C961	1-136-165-00	FILM	0.1uF	5%	50V	

Ref.No.	Part No.	Description		Remark
		< DIODE >		
D901	8-719-312-09	DIODE	RBA-402	
D902	8-719-987-63	DIODE	1N4148M	
D903	8-719-200-82	DIODE	11ES2	
D904	8-719-200-82	DIODE	11ES2	
D905	8-719-934-22		HZS30-2L	
D906	8-719-014-66	DIODE	UZP-5.6B	
D907	8-719-987-63	DIODE	1N4148M	
D911	8-719-200-82	DIODE	11ES2	
D912	8-719-200-82	DIODE	11ES2	
D913	8-719-200-82	DIODE	11ES2	
D914	8-719-200-82	DIODE	11ES2	
D921	8-719-987-63	DIODE	1N4148M	
D922	8-719-987-63	DIODE	1N4148M	
D945	8-719-987-63	DIODE	1N4148M	
D946	8-719-987-63	DIODE	1N4148M	
		< IC >		
IC901	8-749-900-96	IC	STK4142MK2 (US,CND)	
IC901	8-749-941-52	IC	STK4152II (EXCEPT US,CND)	
IC902	8-759-111-68	IC	UPC1237HA	
		< TRANSISTOR >		
Q901	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q945	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	
Q950	8-729-900-63	TRANSISTOR	DTA124ES	
Q959	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	

Ref.No.	Part No.	Description				Remark
		< RESISTOR >				
R901	1-249-417-11	CARBON	1K	5%	1/4W	
R902	1-249-438-11	CARBON	56K	5%	1/4W	
R903	1-249-418-11	CARBON	1.2K	5%	1/4W	
R904	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R905	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R906	1-249-421-11	CARBON	2.2K	5%	1/4W	
R907	1-249-421-11	CARBON	2.2K	5%	1/4W	
⚠R908	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R909	1-260-099-11	CARBON	1K	5%	1/2W	
⚠R910	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R911	1-260-099-11	CARBON	1K	5%	1/2W	
R912	1-249-417-11	CARBON	1K	5%	1/4W	
R913	1-249-431-11	CARBON	15K	5%	1/4W	
R914	1-249-441-11	CARBON	100K	5%	1/4W	
R915	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R916	1-217-151-00	RES, METAL PLATE	0.22			F
R917	1-260-076-11	CARBON	10	5%	1/2W	
R918	1-249-433-11	CARBON	22K	5%	1/4W	
R919	1-249-441-11	CARBON	100K	5%	1/4W	
R920	1-249-439-11	CARBON	68K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER **TC**

Ref.No.	Part No.	Description			Remark	
R921	1-249-422-11	CARBON	2.7K	5%	1/4W	
R922	1-249-425-11	CARBON	4.7K	5%	1/4W	
R923	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R924	1-215-890-11	METAL OXIDE	470	5%	2W	F
R942	1-249-429-11	CARBON	10K	5%	1/4W	
R943	1-249-426-11	CARBON	5.6K	5%	1/4W	
⚠R944	1-212-897-00	FUSIBLE	470	5%	1/4W	F
R951	1-249-417-11	CARBON	1K	5%	1/4W	
R952	1-249-438-11	CARBON	56K	5%	1/4W	
R953	1-249-418-11	CARBON	1.2K	5%	1/4W	
R954	1-249-438-11	CARBON	56K	5%	1/4W	
R956	1-249-421-11	CARBON	2.2K	5%	1/4W	
R957	1-249-421-11	CARBON	2.2K	5%	1/4W	
R962	1-249-417-11	CARBON	1K	5%	1/4W	
R963	1-249-431-11	CARBON	15K	5%	1/4W	
R964	1-249-441-11	CARBON	100K	5%	1/4W	
R965	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R966	1-217-151-00	RES, METAL PLATE	0.22			F
R967	1-260-076-11	CARBON	10	5%	1/2W	
⚠R999	1-212-881-11	FUSIBLE	100	5%	1/4W	F

< RELAY >

Ref.No.	Part No.	Description
RY901	1-515-920-11	RELAY (24V)

< TERMINAL >

Ref.No.	Part No.	Description
TM901	1-537-240-11	TERMINAL (SPEAKER)

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* A-4357-889-A TC BOARD, COMPLETE

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* 4-886-555-00 HEAT SINK

7-685-646-81 SCREW +BVTP 3X8 TYPE2

< CAPACITOR >

Ref.No.	Part No.	Description			Remark
C201	1-124-443-00	ELECT	100uF	20%	10V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-124-907-11	ELECT	10uF	20%	50V
C204	1-124-902-00	ELECT	0.47uF	20%	50V
C205	1-164-159-11	CERAMIC	0.1uF		50V
C206	1-126-103-11	ELECT	470uF	20%	16V
C207	1-164-159-11	CERAMIC	0.1uF		50V
C316	1-124-443-00	ELECT	100uF	20%	10V
C317	1-124-443-00	ELECT	100uF	20%	10V
C318	1-124-903-11	ELECT	1uF	20%	50V
C321	1-124-907-11	ELECT	10uF	20%	50V
C322	1-106-359-00	MYLAR	4700PF	5%	200V
C323	1-162-290-31	CERAMIC	470PF	10%	50V
C324	1-124-907-11	ELECT	10uF	20%	50V
C325	1-136-165-00	FILM	0.1uF	5%	50V
C326	1-124-903-11	ELECT	1uF	20%	50V
C327	1-124-902-00	ELECT	0.47uF	20%	50V
C328	1-124-903-11	ELECT	1uF	20%	50V
C329	1-124-907-11	ELECT	10uF	20%	50V
C330	1-124-443-00	ELECT	100uF	20%	10V
C371	1-164-159-11	CERAMIC	0.1uF		50V
C385	1-164-159-11	CERAMIC	0.1uF		50V
C386	1-164-159-11	CERAMIC	0.1uF		50V
C387	1-164-159-11	CERAMIC	0.1uF		50V
C388	1-164-159-11	CERAMIC	0.1uF		50V
C390	1-124-122-11	ELECT	100uF	20%	50V
C421	1-124-907-11	ELECT	10uF	20%	50V
C422	1-106-359-00	MYLAR	4700PF	5%	200V
C423	1-162-290-31	CERAMIC	470PF	10%	50V
C424	1-124-907-11	ELECT	10uF	20%	50V
C425	1-136-165-00	FILM	0.1uF	5%	50V
C426	1-124-903-11	ELECT	1uF	20%	50V
C427	1-124-902-00	ELECT	0.47uF	20%	50V
C428	1-124-903-11	ELECT	1uF	20%	50V
C429	1-124-907-11	ELECT	10uF	20%	50V
C430	1-124-443-00	ELECT	100uF	20%	10V
C701	1-124-910-11	ELECT	47uF	20%	50V
C702	1-124-477-11	ELECT	47uF	20%	25V
C703	1-124-477-11	ELECT	47uF	20%	25V

< CONNECTOR >

Ref.No.	Part No.	Description
CN201	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P
CN202	1-695-334-11	PIN, CONNECTOR (PC BOARD) 11P
CN203	1-695-344-11	PIN, CONNECTOR (PC BOARD) 21P
CN204	1-766-527-11	SOCKET, CONNECTOR 17P
*CN206	1-564-517-11	PLUG, CONNECTOR 2P

< DIODE >

Ref.No.	Part No.	Description	
D201	8-719-200-82	DIODE	11ES2
D202	8-719-987-63	DIODE	1N4148M
D203	8-719-987-63	DIODE	1N4148M
D204	8-719-987-63	DIODE	1N4148M
D205	8-719-000-60	DIODE	UZL-6M2
D301	8-719-000-60	DIODE	UZL-6M2
D701	8-719-001-70	DIODE	UZL-12M1

< FUSE >

Ref.No.	Part No.	Description
F701	1-532-782-11	FUSE, MICRO (SECONDARY)

< IC >

Ref.No.	Part No.	Description	
IC201	8-759-283-58	IC	M38122M2-067FP
IC202	8-759-520-90	IC	PST572E
IC203	8-759-822-09	IC	LB1641
IC321	8-759-098-73	IC	HA12172NT

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Ref.No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q203	8-729-900-80	TRANSISTOR DTC114ES	
Q204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q205	8-729-900-80	TRANSISTOR DTC114ES	
Q207	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q227	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q228	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q229	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q230	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q231	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q233	8-729-900-65	TRANSISTOR DTA144ES	
Q234	8-729-902-80	TRANSISTOR DTA114YS	
Q235	8-729-902-80	TRANSISTOR DTA114YS	
Q421	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q422	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q624	8-729-801-93	TRANSISTOR 2SD1387	
Q625	8-729-900-80	TRANSISTOR DTC114ES	
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-429-11	CARBON 10K 5% 1/4W	
R203	1-249-429-11	CARBON 10K 5% 1/4W	
R204	1-249-429-11	CARBON 10K 5% 1/4W	
R205	1-247-887-00	CARBON 220K 5% 1/4W	
R206	1-247-887-00	CARBON 220K 5% 1/4W	
R207	1-249-429-11	CARBON 10K 5% 1/4W	
R208	1-249-429-11	CARBON 10K 5% 1/4W	
R209	1-249-429-11	CARBON 10K 5% 1/4W	
R210	1-249-425-11	CARBON 4.7K 5% 1/4W	
R211	1-249-429-11	CARBON 10K 5% 1/4W	
R212	1-247-903-00	CARBON 1M 5% 1/4W	
R213	1-249-429-11	CARBON 10K 5% 1/4W	
R214	1-249-429-11	CARBON 10K 5% 1/4W	
R215	1-249-417-11	CARBON 1K 5% 1/4W	
R216	1-249-417-11	CARBON 1K 5% 1/4W	
R217	1-249-417-11	CARBON 1K 5% 1/4W	
R218	1-249-417-11	CARBON 1K 5% 1/4W	
R219	1-249-417-11	CARBON 1K 5% 1/4W	
R220	1-249-411-11	CARBON 330 5% 1/4W	
R221	1-249-411-11	CARBON 330 5% 1/4W	
R222	1-249-411-11	CARBON 330 5% 1/4W	
R223	1-247-856-00	CARBON 11K 5% 1/4W	
R224	1-249-432-11	CARBON 18K 5% 1/4W	
R225	1-249-414-11	CARBON 560 5% 1/4W	
R226	1-249-421-11	CARBON 2.2K 5% 1/4W	
R227	1-247-807-31	CARBON 100 5% 1/4W	
R228	1-247-807-31	CARBON 100 5% 1/4W	
R229	1-247-807-31	CARBON 100 5% 1/4W	
R230	1-247-807-31	CARBON 100 5% 1/4W	
R231	1-247-807-31	CARBON 100 5% 1/4W	
R232	1-247-807-31	CARBON 100 5% 1/4W	
R233	1-249-437-11	CARBON 47K 5% 1/4W	
R234	1-249-437-11	CARBON 47K 5% 1/4W	
R235	1-249-436-11	CARBON 39K 5% 1/4W	
R236	1-249-436-11	CARBON 39K 5% 1/4W	
R237	1-249-417-11	CARBON 1K 5% 1/4W	
R238	1-249-425-11	CARBON 4.7K 5% 1/4W	
R239	1-249-425-11	CARBON 4.7K 5% 1/4W	
R240	1-249-425-11	CARBON 4.7K 5% 1/4W	
R241	1-249-429-11	CARBON 10K 5% 1/4W	
R244	1-247-807-31	CARBON 100 5% 1/4W	
R245	1-247-807-31	CARBON 100 5% 1/4W	
R246	1-247-807-31	CARBON 100 5% 1/4W	
R247	1-247-811-31	CARBON 150 5% 1/4W	
R248	1-247-811-31	CARBON 150 5% 1/4W	
R249	1-247-811-31	CARBON 150 5% 1/4W	
R250	1-249-411-11	CARBON 330 5% 1/4W	
R251	1-249-411-11	CARBON 330 5% 1/4W	
R321	1-249-430-11	CARBON 12K 5% 1/4W	
R322	1-249-431-11	CARBON 15K 5% 1/4W	
R323	1-249-428-11	CARBON 8.2K 5% 1/4W	
R324	1-247-840-00	CARBON 2.4K 5% 1/4W	
R325	1-249-433-11	CARBON 22K 5% 1/4W	
R326	1-249-432-11	CARBON 18K 5% 1/4W	
R327	1-249-425-11	CARBON 4.7K 5% 1/4W	
R328	1-249-421-11	CARBON 2.2K 5% 1/4W	
R334	1-249-421-11	CARBON 2.2K 5% 1/4W	
R335	1-249-421-11	CARBON 2.2K 5% 1/4W	
R371	1-215-451-00	METAL 18K 1% 1/6W	
R372	1-249-429-11	CARBON 10K 5% 1/4W	
R373	1-249-429-11	CARBON 10K 5% 1/4W	
R374	1-249-429-11	CARBON 10K 5% 1/4W	
R375	1-249-429-11	CARBON 10K 5% 1/4W	
R376	1-249-429-11	CARBON 10K 5% 1/4W	
R377	1-249-429-11	CARBON 10K 5% 1/4W	
R378	1-249-425-11	CARBON 4.7K 5% 1/4W	
R379	1-249-429-11	CARBON 10K 5% 1/4W	
R380	1-249-417-11	CARBON 1K 5% 1/4W	
R381	1-247-864-11	CARBON 24K 5% 1/4W	
R382	1-249-434-11	CARBON 27K 5% 1/4W	
R383	1-249-441-11	CARBON 100K 5% 1/4W	
R384	1-249-429-11	CARBON 10K 5% 1/4W	
R421	1-249-430-11	CARBON 12K 5% 1/4W	

TCB (US, CND, MX, AUS, EA, E, JE, MY, PX, SP)

Ref.No.	Part No.	Description	Remark
R422	1-249-431-11	CARBON 15K 5%	1/4W
R423	1-249-428-11	CARBON 8.2K 5%	1/4W
R424	1-247-840-00	CARBON 2.4K 5%	1/4W
R425	1-249-433-11	CARBON 22K 5%	1/4W
R426	1-249-432-11	CARBON 18K 5%	1/4W
R427	1-249-425-11	CARBON 4.7K 5%	1/4W
R428	1-249-421-11	CARBON 2.2K 5%	1/4W
R626	1-249-429-11	CARBON 10K 5%	1/4W
R701	1-249-425-11	CARBON 4.7K 5%	1/4W

< VARIABLE RESISTOR >

Ref.No.	Part No.	Description	Remark
RV341	1-241-785-11	RES, ADJ, CARBON 10K	
RV441	1-241-785-11	RES, ADJ, CARBON 10K	

< VIBRATOR >

Ref.No.	Part No.	Description	Remark
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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Ref.No.	Part No.	Description	Remark
*	A-4303-462-A	TCB BOARD, COMPLETE (US,CND,MX)	
*	A-4303-461-A	TCB BOARD, COMPLETE (AUS,EA,E,JE,MY,PX,SP)	

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< CAPACITOR >

Ref.No.	Part No.	Description	Remark
C1	1-126-934-11	CAP, ELECT 220uF	
C2	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C3	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C5	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C6	1-163-091-00	CERAMIC CHIP 8PF	50V
C7	1-163-227-11	CAP,CHIP CERAMIC 10PF CH 2125	
C12	1-164-343-11	CAP,CHIP CERAMIC 56000PF B2125	(AUS,EA,E,JE,MY,PX,SP)
C13	1-163-033-00	CERAMIC CHIP 0.022uF	50V (AUS,EA,E,JE,MY,PX,SP)
C14	1-163-088-00	CERAMIC CHIP 5PF	50V (AUS,EA,E,JE,MY,PX,SP)
C21	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C22	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C23	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C24	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C25	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C26	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C27	1-124-257-00	ELECT 2.2uF 20%	50V
C28	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C29	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C31	1-124-257-00	ELECT 2.2uF 20%	50V
C32	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C33	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C34	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C51	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C52	1-126-162-11	ELECT 3.3uF 20%	50V
C53	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C54	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C55	1-163-105-00	CERAMIC CHIP 33PF 5%	50V
C57	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C58	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C59	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C60	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C61	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V (US/CND)
C61	1-163-022-00	CERAMIC CHIP 0.012uF 10%	50V (AUS,EA,E,JE,MY,PX,SP)
C62	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V (US/CND)
C62	1-163-022-00	CERAMIC CHIP 0.012uF 10%	50V (AUS,EA,E,JE,MY,PX,SP)
C63	1-126-301-11	ELECT 1uF 20%	50V
C64	1-126-301-11	ELECT 1uF 20%	50V
C65	1-126-301-11	ELECT 1uF 20%	50V
C66	1-126-301-11	ELECT 1uF 20%	50V
C70	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C71	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C72	1-126-934-11	CAP, ELECT 220uF	
C73	1-124-257-00	ELECT 2.2uF 20%	50V
C74	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C75	1-126-157-11	ELECT 10uF 20%	16V
C76	1-126-933-11	CAP, ELECT 100uF	
C77	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C78	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C79	1-126-157-11	ELECT 10uF 20%	16V
C80	1-126-925-11	CAP, ELECT 470uF	
C81	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C82	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C86	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
C87	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V

< FILTER >

Ref.No.	Part No.	Description	Remark
CF1	1-567-389-11	FILTER, CERAMIC	
CF51	1-567-389-11	FILTER, CERAMIC	

< CONNECTOR >

Ref.No.	Part No.	Description	Remark
*CN3	1-537-613-11	TERMINAL (8P)	

< VARIABLE CAPACITOR >

Ref.No.	Part No.	Description	Remark
CV1	1-141-227-00	CAP, TRIMMER 20PF	(AUS,EA,E,JE,MY,PX,SP)
CV2	1-141-227-00	CAP, TRIMMER 20PF	(AUS,EA,E,JE,MY,PX,SP)

TCB (US, CND, MX, AUS, EA, E, JE, MY, PX, SP)

Ref.No.	Part No.	Description	Remark
		< DIODE >	
D1	8-719-976-30	DIODE KV1560N	(AUS,EA,E,JE,MY,PX,SP)
D21	8-719-422-46	DIODE MA8056	
D51	8-719-016-74	DIODE 1SS352	
		< FRONTEND >	
FE1	1-465-673-11	FRONT END (2 BAND)	
FE2	1-239-260-11	ENCAPSULATED COMPONENT	(US/CND)
FE2	1-239-262-11	ENCAPSULATED COMPONENT	(AUS,EA,E,JE,MY,PX,SP)
		< IC >	
IC21	8-759-821-43	IC LC7218M	
IC51	8-759-823-68	IC LA1851NM	
		< IFT >	
IFT5	1-406-821-11	COIL (DISCRIMINATOR)	
IFT5	1-404-713-11	TRANSFORMER, IF	
		< JUMPER RESISTOR >	
JW1	1-216-295-91	RES, CHIP 0	
JW2	1-216-295-91	RES, CHIP 0	
JW3	1-216-295-91	RES, CHIP 0	(AUS,EA,E,JE,MY,PX,SP)
JW4	1-216-295-91	RES, CHIP 0	(US/CND)
JW5	1-216-295-91	RES, CHIP 0	(US/CND)
JW6	1-216-295-91	RES, CHIP 0	(US/CND)
		< COIL >	
L51	1-408-798-00	CHIP INDUCTOR 1mH	
		< FILTER >	
LPF5	1-239-597-11	FILTER, LOW PASS	
LPF5	1-239-597-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-804-72	TRANSISTOR 2SC2814-F4	
Q3	8-729-810-16	TRANSISTOR 2SA1678	
Q4	8-729-602-36	TRANSISTOR 2SA1602	(AUS,EA,E,JE,MY,PX,SP)
Q5	8-729-602-36	TRANSISTOR 2SA1602	(AUS,EA,E,JE,MY,PX,SP)
Q6	8-729-810-28	TRANSISTOR 2SC4398	(AUS,EA,E,JE,MY,PX,SP)
Q7	8-729-810-28	TRANSISTOR 2SC4398	(AUS,EA,E,JE,MY,PX,SP)
Q21	8-729-602-21	TRANSISTOR 2SC4154-F	
Q22	8-729-232-69	TRANSISTOR 2SK208GR3	
Q23	8-729-232-59	TRANSISTOR 2SC4666B	

Ref.No.	Part No.	Description	Remark
Q51	8-729-602-21	TRANSISTOR 2SC4154-F	
Q52	8-729-602-21	TRANSISTOR 2SC4154-F	
Q53	8-729-810-28	TRANSISTOR 2SC4398	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5% 1/10W	
R2	1-216-037-00	METAL CHIP 330 5% 1/10W	
R3	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R4	1-216-037-00	METAL CHIP 330 5% 1/10W	
R7	1-216-017-00	METAL CHIP 47 5% 1/10W	
R8	1-216-073-00	METAL CHIP 10K 5% 1/10W	(AUS,EA,E,JE,MY,PX,SP)
R9	1-216-089-00	RES, CHIP 47K	
R10	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R16	1-216-073-00	METAL CHIP 10K 5% 1/10W	(AUS,EA,E,JE,MY,PX,SP)
R17	1-216-121-00	METAL CHIP 1M 5% 1/10W	(AUS,EA,E,JE,MY,PX,SP)
R18	1-216-073-00	METAL CHIP 10K 5% 1/10W	(AUS,EA,E,JE,MY,PX,SP)
R21	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R24	1-216-025-00	METAL CHIP 100 5% 1/10W	
R25	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R26	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R27	1-216-073-00	METAL CHIP 10K 5% 1/10W	(AUS,EA,E,JE,MY,PX,SP)
R28	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R29	1-216-025-00	METAL CHIP 100 5% 1/10W	
R30	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R31	1-216-043-00	METAL CHIP 560 5% 1/10W	
R32	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R33	1-216-035-00	METAL CHIP 270 5% 1/10W	
R34	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R35	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R36	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R37	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R38	1-216-025-00	METAL CHIP 100 5% 1/10W	
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R52	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R53	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R54	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R55	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R57	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R58	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R59	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R60	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R61	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R62	1-216-115-00	METAL CHIP 560K 5% 1/10W	

TCB (US, CND, MX, AUS, EA, E, JE, MY, PX, SP)

Ref.No.	Part No.	Description	Remark
R63	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R64	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R65	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R66	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R67	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R68	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R69	1-216-025-00	METAL CHIP 100 5% 1/10W	
R70	1-216-025-00	METAL CHIP 100 5% 1/10W	
R71	1-216-089-00	RES, CHIP 47K	
R72	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R73	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R74	1-216-013-00	METAL CHIP 33 5% 1/10W	
		< VARIABLE RESISTOR >	
RV51	1-238-601-11	RES, ADJ, CARBON 22K	
RV52	1-238-601-11	RES, ADJ, CARBON 22K	
RV53	1-238-598-11	RES, ADJ, CARBON 2.2K	
		< TRANSFORMER >	
T1	1-402-424-11	COIL (ANT, SW3)	(AUS, EA, E, JE, MY, PX, SP)
T2	1-406-346-11	COIL (OSC, SW3)	(AUS, EA, E, JE, MY, PX, SP)
		< TEST PIN >	
TP51	1-564-505-11	PLUG, CONNECTOR 2P	
		< VIBRATOR >	
X21	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)	
X51	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	

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TCB (AEP, UK, G, IT)

Ref.No.	Part No.	Description	Remark
*	A-4303-459-A	TCB BOARD, COMPLETE (AEP, UK)	
*	A-4303-460-A	TCB BOARD, COMPLETE (G, IT)	
		*******************	
		< CAPACITOR >	
C1	1-126-934-11	CAP, ELECT 220uF	
C2	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C3	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C5	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	(AEP, UK)
C6	1-163-038-00	CERAMIC CHIP 0.1uF 25V	(AEP, UK)
C6	1-216-295-91	RES, CHIP 0	(G, IT)
C8	1-163-038-00	CERAMIC CHIP 0.1uF 25V	(AEP, UK)
C8	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	(G, IT)
C9	1-163-012-00	CAP, CHIP CERAMIC 1800PF B 2125	(AEP, UK)
C10	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	(AEP, UK)
C11	1-163-089-00	CERAMIC CHIP 6PF 50V	(AEP, UK)
C11	1-163-091-00	CERAMIC CHIP 8PF 50V	(G, IT)
C12	1-163-227-11	CAP, CHIP CERAMIC 10PF CH 2125	
C13	1-163-089-00	CERAMIC CHIP 6PF 50V	(AEP, UK)
C21	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C22	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C23	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C24	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C25	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C26	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C27	1-124-257-00	ELECT 2.2uF 20% 50V	
C29	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C31	1-124-257-00	ELECT 2.2uF 20% 50V	
C32	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C33	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C34	1-164-005-11	CERAMIC CHIP 0.47uF 25V	(AEP, UK)
C35	1-163-033-00	CERAMIC CHIP 0.022uF 50V	(AEP, UK)
C36	1-163-033-00	CERAMIC CHIP 0.022uF 50V	(AEP, UK)
C51	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C52	1-126-162-11	ELECT 3.3uF 20% 50V	
C53	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C54	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125.	
C55	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	(AEP, UK)
C55	1-163-135-00	CERAMIC CHIP 560PF 5% 50V	(G, IT)
C56	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	(G, IT)
C57	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C58	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C59	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C60	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C61	1-163-023-00	CERAMIC CHIP 0.015uF 10% 50V	
C62	1-163-023-00	CERAMIC CHIP 0.015uF 10% 50V	
C63	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C64	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C65	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C66	1-164-346-11	CAP, CHIP CERAMIC 1.0uF F(2125)	
C69	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C71	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C72	1-126-934-11	CAP, ELECT 220uF	
C73	1-124-257-00	ELECT 2.2uF 20% 50V	
C74	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C75	1-126-157-11	ELECT 10uF 20% 16V	
C76	1-126-933-11	CAP, ELECT 100uF	
C79	1-126-157-11	ELECT 10uF 20% 16V	
C80	1-126-925-11	CAP, ELECT 470uF	
C81	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C82	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C83	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C86	1-163-016-00	CERAMIC CHIP 0.0039uF 10% 50V	
C87	1-163-016-00	CERAMIC CHIP 0.0039uF 10% 50V	
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	(AEP, UK)
CF1	1-579-374-71	FILTER, CERAMIC	(G, IT)
CF2	1-567-389-11	FILTER, CERAMIC	(G, IT)

TCB (AEP, UK, G, IT)

Ref.No.	Part No.	Description	Remark
CF51	1-567-389-11	FILTER, CERAMIC	(AEP,UK)
CF51	1-579-374-71	FILTER, CERAMIC	(G,IT)
		< CONNECTOR >	
*CN3	1-537-613-11	TERMINAL (8P)	
		< DIODE >	
D21	8-719-422-46	DIODE MA8056	
D51	8-719-016-74	DIODE 1SS352	
		< FRONTEND >	
FE1	1-465-673-11	FRONT END (2 BAND)	(AEP,UK)
FE1	1-465-007-11	FRONT END (4 GANG)	(G,IT)
FE2	1-239-261-12	ENCAPSULATED COMPONENT	(AEP,UK)
FE2	1-239-260-11	ENCAPSULATED COMPONENT	(G,IT)
FE3	1-236-463-11	ENCAPSULATED COMPONENT	(AEP,UK)
		< FILTER >	
FL51	1-239-029-11	ENCAPSULATED COMPONENT	(G,IT)
		< IC >	
IC21	8-759-821-43	IC LC7218M	
IC51	8-759-823-68	IC LA1851NM	
		< IFT >	
IFT5	1-406-821-11	COIL (DISCRIMINATOR)	
IFT5	1-404-713-11	TRANSFORMER, IF	
		< JUMPER RESISTOR >	
JW1	1-216-295-91	RES, CHIP 0	
JW2	1-216-295-91	RES, CHIP 0	(AEP,UK)
JW3	1-216-295-91	RES, CHIP 0	(G,IT)
JW5	1-216-295-91	RES, CHIP 0	
JW7	1-216-295-91	RES, CHIP 0	
JW8	1-216-295-91	RES, CHIP 0	
JW9	1-216-295-91	RES, CHIP 0	(AEP,UK)
		< COIL >	
L1	1-408-793-21	INDUCTOR CHIP 220uH	(AEP,UK)
L51	1-408-798-00	CHIP INDUCTOR 1mH	
		< FILTER >	
LPF5	1-239-597-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-804-72	TRANSISTOR 2SC2814-F4	
Q2	8-729-804-72	TRANSISTOR 2SC2814-F4	(G,IT)
Q3	8-729-810-16	TRANSISTOR 2SA1678	
Q4	8-729-602-36	TRANSISTOR 2SA1602	(AEP,UK)
Q5	8-729-810-28	TRANSISTOR 2SC4398	(AEP,UK)
Q6	8-729-602-36	TRANSISTOR 2SA1602	(AEP,UK)
Q7	8-729-810-28	TRANSISTOR 2SC4398	(AEP,UK)
Q21	8-729-602-21	TRANSISTOR 2SC4154-F	
Q22	8-729-232-69	TRANSISTOR 2SK208GR3	
Q23	8-729-232-59	TRANSISTOR 2SC4666B	
Q24	8-729-232-69	TRANSISTOR 2SK208GR3	(AEP,UK)
Q25	8-729-232-59	TRANSISTOR 2SC4666B	(AEP,UK)
Q51	8-729-602-21	TRANSISTOR 2SC4154-F	
Q52	8-729-602-21	TRANSISTOR 2SC4154-F	
Q53	8-729-810-28	TRANSISTOR 2SC4398	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5% 1/10W	
R2	1-216-037-00	METAL CHIP 330 5% 1/10W	
R3	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R4	1-216-037-00	METAL CHIP 330 5% 1/10W	
R5	1-216-109-00	METAL CHIP 330K 5% 1/10W	(G,IT)
R6	1-216-037-00	METAL CHIP 330 5% 1/10W	(G,IT)
R7	1-216-017-00	METAL CHIP 47 5% 1/10W	
R8	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(AEP,UK)
R9	1-216-089-00	RES, CHIP 47K	(AEP,UK)
R10	1-216-097-00	METAL CHIP 100K 5% 1/10W	(AEP,UK)
R11	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(AEP,UK)
R12	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(AEP,UK)
R13	1-216-089-91	RES, CHIP 47K	
R14	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R15	1-216-121-00	METAL CHIP 1M 5% 1/10W	(AEP,UK)
R15	1-216-295-91	RES, CHIP 0	(G,IT)
R16	1-216-089-91	RES, CHIP 47K	(AEP,UK)
R21	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R24	1-216-025-00	METAL CHIP 100 5% 1/10W	
R25	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R26	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R27	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R28	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R29	1-216-025-00	METAL CHIP 100 5% 1/10W	
R30	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R31	1-216-043-00	METAL CHIP 560 5% 1/10W	
R32	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R33	1-216-035-00	METAL CHIP 270 5% 1/10W	
R34	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R35	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R36	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R37	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R38	1-216-025-00	METAL CHIP 100 5% 1/10W	

TCB (AEP, UK, G, IT) TCB (EE, CIS)

Ref.No.	Part No.	Description	Remark
R39	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	(AEP,UK)
R40	1-216-043-00	METAL CHIP 560 5% 1/10W	(AEP,UK)
R41	1-216-049-00	METAL CHIP 1K 5% 1/10W	(AEP,UK)
R42	1-216-035-00	METAL CHIP 270 5% 1/10W	(AEP,UK)
R43	1-216-081-00	METAL CHIP 22K 5% 1/10W	(AEP,UK)
R44	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(AEP,UK)
R45	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(AEP,UK)
R46	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R52	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R53	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R54	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R55	1-216-075-00	METAL CHIP 12K 5% 1/10W	(AEP,UK)
R56	1-216-075-00	METAL CHIP 12K 5% 1/10W	(G,IT)
R57	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R58	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R59	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R60	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R61	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R62	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R63	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R64	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R65	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R66	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R67	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R68	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R69	1-216-025-00	METAL CHIP 100 5% 1/10W	
R70	1-216-025-00	METAL CHIP 100 5% 1/10W	
R71	1-216-089-00	RES, CHIP 47K	
R72	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R73	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R74	1-216-013-00	METAL CHIP 33 5% 1/10W	
R75	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	

< VARIABLE RESISTOR >

Ref.No.	Part No.	Description	Remark
RV51	1-238-601-11	RES, ADJ, CARBON 22K	
RV52	1-238-601-11	RES, ADJ, CARBON 22K	
RV53	1-238-598-11	RES, ADJ, CARBON 2.2K	

< TEST PIN >

Ref.No.	Part No.	Description	Remark
TP51	1-564-505-11	PLUG, CONNECTOR 2P	

< VIBRATOR >

Ref.No.	Part No.	Description	Remark
X21	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)	
X51	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	

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Ref.No.	Part No.	Description	Remark
*	A-4303-480-A	TCB BOARD, COMPLETE (EE,CIS)	

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< CAPACITOR >

Ref.No.	Part No.	Description	Remark
C1	1-126-934-11	CAP, ELECT 220uF	
C2	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C3	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C5	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C6	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C8	1-163-038-00	CERAMIC CHI 0.1uF	25V
C9	1-163-012-00	CAP,CHIP CERAMIC 1800PF B 2125	
C10	1-163-011-11	CERAMIC CHIP 0.0015uF 10%	50V
C11	1-163-089-00	CERAMIC CHIP 6PF	50V
C12	1-163-227-11	CAP,CHIP CERAMIC 10PF CH 2125	
C13	1-163-089-00	CERAMIC CHIP 6PF	50V
C21	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C22	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C23	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C24	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C25	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C26	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C27	1-124-257-00	ELECT 2.2uF 20%	50V
C29	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C31	1-124-257-00	ELECT 2.2uF 20%	50V
C32	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C33	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C34	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C35	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C36	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C51	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C52	1-126-162-11	ELECT 3.3uF 20%	50V
C53	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C54	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C55	1-163-105-00	CERAMIC CHIP 33PF 5%	50V
C57	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C58	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C59	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C60	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C61	1-163-022-00	CERAMIC CHIP 0.012uF 10%	50V
C62	1-163-022-00	CERAMIC CHIP 0.012uF 10%	50V
C63	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C64	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C65	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C66	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)	
C69	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C71	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C72	1-126-934-11	CAP, ELECT 220uF	
C73	1-124-257-00	ELECT 2.2uF 20%	50V
C74	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	

Ref.No.	Part No.	Description	Remark
C75	1-126-157-11	ELECT 10uF 20%	16V
C76	1-126-933-11	CAP, ELECT 100uF	
C79	1-126-157-11	ELECT 10uF 20%	16V
C80	1-126-925-11	CAP, ELECT 470uF	
C81	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C82	1-163-031-11	CAP, CHIP CERAMIC 0.01uF F 2125	
C86	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
C87	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	
CF51	1-567-389-11	FILTER, CERAMIC	
		< CONNECTOR >	
*CN3	1-537-613-11	TERMINAL (8P)	
		< DIODE >	
D21	8-719-422-46	DIODE MA8056	
D51	8-719-016-74	DIODE 1SS352	
		< FRONTEND >	
FE1	1-465-396-11	FRONT END (3 GANG)	
FE2	1-239-261-12	ENCAPSULATED COMPONENT	
FE3	1-236-463-11	ENCAPSULATED COMPONENT	
		< IC >	
IC21	8-759-821-43	IC LC7218M	
IC51	8-759-823-68	IC LA1851NM	
		< IFT >	
IFT51	1-406-821-11	COIL (DISCRIMINATOR)	
IFT52	1-404-713-11	TRANSFORMER, IF	
		< JUMPER RESISTOR >	
JW1	1-216-295-91	RES, CHIP 0	
JW2	1-216-295-91	RES, CHIP 0	
JW5	1-216-295-91	RES, CHIP 0	
JW7	1-216-295-91	RES, CHIP 0	
JW8	1-216-295-91	RES, CHIP 0	
JW9	1-216-295-91	RES, CHIP 0	
		< COIL >	
L1	1-408-793-21	INDUCTOR CHIP 220uH	
L51	1-408-798-00	CHIP INDUCTOR 1mH	
		< FILTER >	
LPF51	1-239-597-11	FILTER, LOW PASS	
LPF52	1-239-597-11	FILTER, LOW PASS	

Ref.No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q1	8-729-804-72	TRANSISTOR 2SC2814-F4	
Q3	8-729-810-16	TRANSISTOR 2SA1678	
Q4	8-729-602-36	TRANSISTOR 2SA1602	
Q5	8-729-810-28	TRANSISTOR 2SC4398	
Q6	8-729-602-36	TRANSISTOR 2SA1602	
Q7	8-729-810-28	TRANSISTOR 2SC4398	
Q21	8-729-602-21	TRANSISTOR 2SC4154-F	
Q22	8-729-232-69	TRANSISTOR 2SK208GR3	
Q23	8-729-232-59	TRANSISTOR 2SC4666B	
Q24	8-729-232-69	TRANSISTOR 2SK208GR3	
Q25	8-729-232-59	TRANSISTOR 2SC4666B	
Q51	8-729-602-21	TRANSISTOR 2SC4154-F	
Q52	8-729-602-21	TRANSISTOR 2SC4154-F	
Q53	8-729-810-28	TRANSISTOR 2SC4398	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5% 1/10W	
R2	1-216-037-00	METAL CHIP 330 5% 1/10W	
R3	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R4	1-216-037-00	METAL CHIP 330 5% 1/10W	
R7	1-216-017-00	METAL CHIP 47 5% 1/10W	
R8	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R9	1-216-089-00	RES, CHIP 47K	
R10	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R11	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R12	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R13	1-216-089-91	RES, CHIP 47K	
R14	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R15	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R16	1-216-089-91	RES, CHIP 47K	
R21	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R24	1-216-025-00	METAL CHIP 100 5% 1/10W	
R25	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R26	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R27	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R28	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R29	1-216-025-00	METAL CHIP 100 5% 1/10W	
R30	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R31	1-216-043-00	METAL CHIP 560 5% 1/10W	
R32	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R33	1-216-035-00	METAL CHIP 270 5% 1/10W	
R34	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R35	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R36	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R37	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

TCB (EE, CIS) | TC FUTA | TC SW

Ref.No.	Part No.	Description	Remark
R38	1-216-025-00	METAL CHIP 100 5% 1/10W	
R39	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R40	1-216-043-00	METAL CHIP 560 5% 1/10W	
R41	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R42	1-216-035-00	METAL CHIP 270 5% 1/10W	
R43	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R44	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R45	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R46	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R52	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R53	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R54	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R55	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R57	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R58	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R59	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R60	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R61	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R62	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R63	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R64	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R65	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R66	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R67	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R68	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R69	1-216-025-00	METAL CHIP 100 5% 1/10W	
R70	1-216-025-00	METAL CHIP 100 5% 1/10W	
R71	1-216-089-00	RES, CHIP 47K	
R72	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R73	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R74	1-216-013-00	METAL CHIP 33 5% 1/10W	
R75	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
		< VARIABLE RESISTOR >	
RV51	1-238-601-11	RES, ADJ, CARBON 22K	
RV52	1-238-601-11	RES, ADJ, CARBON 22K	
RV53	1-238-598-11	RES, ADJ, CARBON 2.2K	
		< TEST PIN >	
TP51	1-564-505-11	PLUG, CONNECTOR 2P	
		< VIBRATOR >	
X21	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)	
X51	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	

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Ref.No.	Part No.	Description	Remark
*	1-652-279-11	TC FUTA BOARD *************	
		< CONNECTOR >	
CN9970	1-580-482-11	SOCKET, CONNECTOR 7P	
		< DIODE >	
D9070	8-719-301-43	LED SEL2410E-C-TP6 (▷)	
D9080	8-719-301-43	LED SEL2410E-C-TP6 (▷)	
D9090	8-719-301-43	LED SEL2410E-C-TP6 (◁)	
D9100	8-719-301-43	LED SEL2410E-C-TP6 (◁)	
		< JUMPER RESISTOR >	
JW9970	1-216-295-91	METAL GLAZE 0 5% 1/10W	
		< RESISTOR >	
R9010	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9020	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9030	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9150	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9160	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9200	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R9210	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9220	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9230	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R9240	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R9250	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		< SWITCH >	
S9010	1-554-303-21	SWITCH, TACTILE (■)	
S9020	1-554-303-21	SWITCH, TACTILE (▷)	
S9030	1-554-303-21	SWITCH, TACTILE (◁)	
S9040	1-554-303-21	SWITCH, TACTILE (◀◀)	
S9050	1-554-303-21	SWITCH, TACTILE (▶▶)	

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Ref.No.	Part No.	Description	Remark
*	A-4369-795-A	TC SW BOARD, COMPLETE *********************	
		< CONNECTOR >	
CN9980	1-580-482-11	SOCKET, CONNECTOR 7P	
CN9990	1-766-319-11	SOCKET, CONNECTOR 17P	
		< DIODE >	
D9010	8-719-032-87	LED SE5420E-TP15 (▷)	
D9020	8-719-032-87	LED SE5420E-TP15 (◁)	
D9030	8-719-033-06	LED SEL5920A-TP15 (❚❚ PAUSE)	
D9040	8-719-032-83	LED SEL5220S-TP15 (● REC)	
D9050	8-719-311-05	LED SEL3213C-D (HIGH SPEED DUBBING)	

Ref.No.	Part No.	Description	Remark
D9060	8-719-311-05	LED SEL3213C-D (CD SYNCRO)	

< JUMPER RESISTOR >

Ref.No.	Part No.	Description	Remark
JW9010	1-216-295-91	METAL GLAZE 0 5% 1/10W	

< RESISTOR >

Ref.No.	Part No.	Description	Remark
R9040	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9050	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9060	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R9070	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9080	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9090	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9100	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9110	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9120	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9140	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

< SWITCH >

Ref.No.	Part No.	Description	Remark
S9060	1-554-303-21	SWITCH, TACTILE (● REC)	
S9070	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S9080	1-554-303-21	SWITCH, TACTILE (HIGH SPEED DUBBING)	
S9090	1-554-303-21	SWITCH, TACTILE (■)	
S9100	1-554-303-21	SWITCH, TACTILE (▷)	
S9110	1-554-303-21	SWITCH, TACTILE (◁)	
S9120	1-554-303-21	SWITCH, TACTILE (CD SYNCRO)	
S9130	1-554-303-21	SWITCH, TACTILE (◀◀)	
S9140	1-554-303-21	SWITCH, TACTILE (▶▶)	
S9150	1-692-503-11	SWITCH, SLIDE (DIRECTION)	
S9160	1-692-356-11	SWITCH, SLIDE (DOLBY NR)	

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Ref.No.	Part No.	Description	Remark
*	1-652-291-11	TRANSFORMER BOARD	

< CONNECTOR >

Ref.No.	Part No.	Description	Remark
⚠CN901	1-564-321-00	PIN, CONNECTOR 2P	
*CN902	1-569-508-11	PIN, CONNECTOR 8P	

< FUSE >

Ref.No.	Part No.	Description	Remark
⚠F901	1-576-103-11	FUSE (1.6A/250V)	(US,CND)
⚠F901	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(E,EA,SP,PX,JE,MY,MX)
⚠F901	1-532-284-00	FUSE, TIME-LAG (T0.63AL/250V)	(AEP,UK,G,IT,EE,AUS,CIS)
⚠F902	1-532-284-00	FUSE, TIME-LAG (T0.63AL/250V)	(E,EA,SP,PX,JE,MY,MX)

< RESISTOR >

Ref.No.	Part No.	Description	Remark
⚠R900	1-202-725-00	SOLID 3.3M 10% 1/2W	(US,CND,MX)

< SWITCH >

Ref.No.	Part No.	Description	Remark
⚠S901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)	(E,EA,MY,SP,PX,JE,MX)

* * *

Ref.No.	Part No.	Description	Remark
*	1-652-294-11	TRANSFORMER RELAY BOARD	

< CONNECTOR >

Ref.No.	Part No.	Description	Remark
*CN903	1-562-573-11	SOCKET, CONNECTOR 8P	
*CN904	1-569-508-11	PIN, CONNECTOR 8P	

< FUSE >

Ref.No.	Part No.	Description	Remark
⚠F911	1-576-103-11	FUSE (1.6A/250V)	(US,CND)
⚠F911	1-532-259-00	FUSE, TIME-LAG (T1.6AL/250V)	(E,EA,SP,PX,JE,MY,MX)
⚠F911	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(AEP,UK,G,IT,EE,AUS,CIS)
⚠F912	1-576-103-11	FUSE (1.6A/250V)	(US,CND)
⚠F912	1-532-259-00	FUSE, TIME-LAG (T1.6AL/250V)	(E,EA,SP,PX,JE,MY,MX)
⚠F912	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(AEP,UK,G,IT,EE,AUS,CIS)

* * *

Ref.No.	Part No.	Description	Remark
*	1-651-391-11	TRAY MOTOR BOARD	

< CAPACITOR >

Ref.No.	Part No.	Description	Remark
C502	1-164-159-11	CERAMIC 0.1uF 50V	

* * *

Ref.No.	Part No.	Description	Remark
*	1-651-396-11	U/D MOTOR BOARD	

< CAPACITOR >

Ref.No.	Part No.	Description	Remark
C501	1-164-159-11	CERAMIC 0.1uF 50V	

* * *

Ref.No.	Part No.	Description	Remark
*	1-652-292-11	VOLUME BOARD	

< CAPACITOR >

Ref.No.	Part No.	Description	Remark
C188	1-164-159-11	CERAMIC 0.1uF 50V	
C301	1-124-477-11	ELECT 47uF 20% 25V	

< DIODE >

Ref.No.	Part No.	Description	Remark
D301	8-719-987-63	DIODE 1N4148M	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

VOLUME

Ref.No.	Part No.	Description	Remark
		< IC >	
IC301	8-759-820-62	IC LB1639	
		< RESISTOR >	
R301	1-249-425-11	CARBON 4.7K 5% 1/4W	
R302	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV301	1-223-674-11	RES, VAR, CARBON 100K/100K (VOLUME)	

****

MISCELLANEOUS

****

Ref.No.	Part No.	Description	Remark
4	1-575-784-11	WIRE (FLAT TYPE) (13 CORE) (CIS)	
13	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	
⚠14	1-569-008-11	ADAPTER, CONVERSION 2P (EA,MY,SP)	
⚠15	1-569-007-11	ADAPTER, CONVERSION 2P (E,PX,JE)	
60	1-765-498-11	WIRE (FLAT TYPE) (21 CORE)	
63	1-765-495-11	WIRE (FLAT TYPE) (7 CORE)	
66	1-765-496-11	WIRE (FLAT TYPE) (17 CORE)	
70	1-765-503-11	WIRE, (LAT TYPE) (19 CORE)	
71	1-765-500-11	WIRE (FLAT TYPE) (7 CORE)	
109	1-751-820-11	WIRE (FLAT TYPE) (21 CORE)	
111	1-765-501-11	WIRE (FLAT TYPE) (11 CORE)	
112	1-765-502-11	WIRE (FLAT TYPE) (15 CORE)	
267	1-765-499-11	WIRE (FLAT TYPE) (22 CORE)	
312	1-452-719-11	MAGNET ASSY	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK-A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK-B)	
⚠J901	1-574-805-41	CORD, POWER (EA,SP,AEP,G,IT,EE,CIS)	
⚠J901	1-574-902-11	CORD, POWER (E,MY,PX,JE)	
⚠J901	1-590-083-11	CORD, POWER (AUS)	
⚠J901	1-690-609-21	CORD, POWER (US,CND,MX)	
⚠J901	1-696-570-21	CORD, POWER (UK)	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M101	X-4917-523-3	MOTOR ASSY, DISK (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M2	X-3369-111-1	MOTOR ASSY (TRRIGER)	
M501	A-4660-642-A	MOTOR (U/D) ASSY	
M502	X-4944-463-1	MOTOR ASSY (TRAY)	
⚠T901	1-426-833-11	TRANSFORMER, POWER (US)	
⚠T901	1-426-834-11	TRANSFORMER, POWER (CND)	
⚠T901	1-426-835-11	TRANSFORMER, POWER (AEP,G,IT,EE,CIS)	
⚠T901	1-426-836-11	TRANSFORMER, POWER (AUS,UK)	
⚠T901	1-426-837-11	TRANSFORMER, POWER (E,EA,MX,MY,SP,PX,JE)	

****

ACCESSORIES & PACKING MATERIALS

****

Ref.No.	Part No.	Description	Remark
	1-467-778-11	REMOTE COMMANDERR (RM-S545)	(AEP,UK,G,IT,EE,CIS)
	1-501-374-11	ANTENNA, LOOP	(AEP,UK,G,IT,EE,CIS)
	1-501-594-11	ANTENNA (FM)	(AEP,UK,G,IT,EE,CIS)
	2-181-754-21	LID, BATTERY (RM-S545)	(AEP,UK,G,IT,EE,CIS)
*	3-704-350-01	SHEET (STANDARD), PROTECTION	
	3-758-881-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)	(AEP,UK)
	3-758-881-31	MANUAL, INSTRUCTION (SWEDISH,DANISH,FINNISH)	(AEP)
	3-758-881-41	MANUAL, INSTRUCTION (GERMAN,DUTCH,ITALIAN)	(AEP,G,IT)
	3-758-881-61	MANUAL, INSTRUCTION (ENGLISH,RUSSIAN,POLISH)	(EE,CIS)
*	4-967-340-01	CUSHION (FRONT)	
*	4-967-341-01	CUSHION (REAR)	
*	4-967-347-01	INDIVIDUAL CARTON	(AEP,UK,G,IT,EE,CIS)

****

****

HARDWARE LIST

****

Ref.No.	Part No.	Description
#1	7-682-548-09	SCREW +BVTT 3X8 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#5	7-685-646-81	SCREW +BVTP 3X8 TYPE2
#6	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#7	7-682-548-04	SCREW +BVTT 3X8 (S)
#8	7-621-770-67	SCREW +BVTT 2.6X6 (S)
#9	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#10	7-623-921-01	RING, RETAINING, CAPSTAN
#11	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#12	7-621-775-00	SCREW +B 2.6X3
#13	7-621-775-10	SCREW +B 2.6X4
#14	7-682-547-09	SCREW +BVTT 3X6 (S)
#15	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
#16	7-621-773-86	SCREW +B 2.6X4
#17	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#18	7-621-255-15	SCREW +P 2X3

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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Home A&V Products Div.

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HCD-C33

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
PX Model

CORRECTION-1

Correct your service manual as shown below.

☛ : **indicates corrected portion.**

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
77, 108	13	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	1-765-503-11 ☛	WIRE (FLAT TYPE) (19 CORE)
78, 108	70	1-765-503-11	WIRE (FLAT TYPE) (19 CORE)	1-765-497-11 ☛	WIRE (FLAT TYPE) (19 CORE)

(SPM-95013)

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

9-959-595-91

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HCD-C33

SONY®
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
PX Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject : 1. DIAGRAMS are chenged
2. Electrical parts list
3. Correction

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Section *Title* *Page*

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1-2. Schematic Diagram—MAIN Section— ······················7
1-3. Schematic Diagram—TC Section— ······················12
1-4. Printed Wiring Boards—TC Section— ······················17
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2. ELECTRICAL PARTS LIST ······························40
3. CORRECTION ······························55

1. DIAGRAMS

1-1. PRINTED WIRING BOARDS—MAIN Section—

- See page 25–27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C - 4	IC301	H - 2
D102	B - 4	IC701	G - 5
D301	I - 2	IC702	F - 5
D703	G - 5	IC901	H - 16
D706	G - 5	IC902	G - 14
D707	F - 4		
D708	G - 10	Q105	C - 6
D901	D - 14	Q106	C - 6
D902	F - 15	○ Q107	D - 8
D903	H - 14	○ Q108	D - 8
D904	H - 14	Q110	D - 7
D905	H - 14	Q111	D - 6
D906	I - 14	Q112	D - 6
D907	I - 15	Q113	D - 5
D911	E - 15	Q114	D - 5
D912	E - 15	Q115	D - 5
D913	E - 15	Q155	C - 6
D914	E - 15	Q701	F - 6
D921	E - 15	Q702	F - 7
D922	E - 15	Q704	F - 4
D945	F - 14	Q705	G - 7
D946	D - 13	Q706	F - 4
		Q707	G - 5
IC101	E - 10	Q708	F - 9
IC102	E - 5	Q709	F - 10
IC103	G - 9	Q901	H - 14
IC104	E - 7	Q945	I - 15
IC106	B - 5	Q950	F - 14
IC112	C - 6	Q959	G - 15

Note :
○ : CIS model only

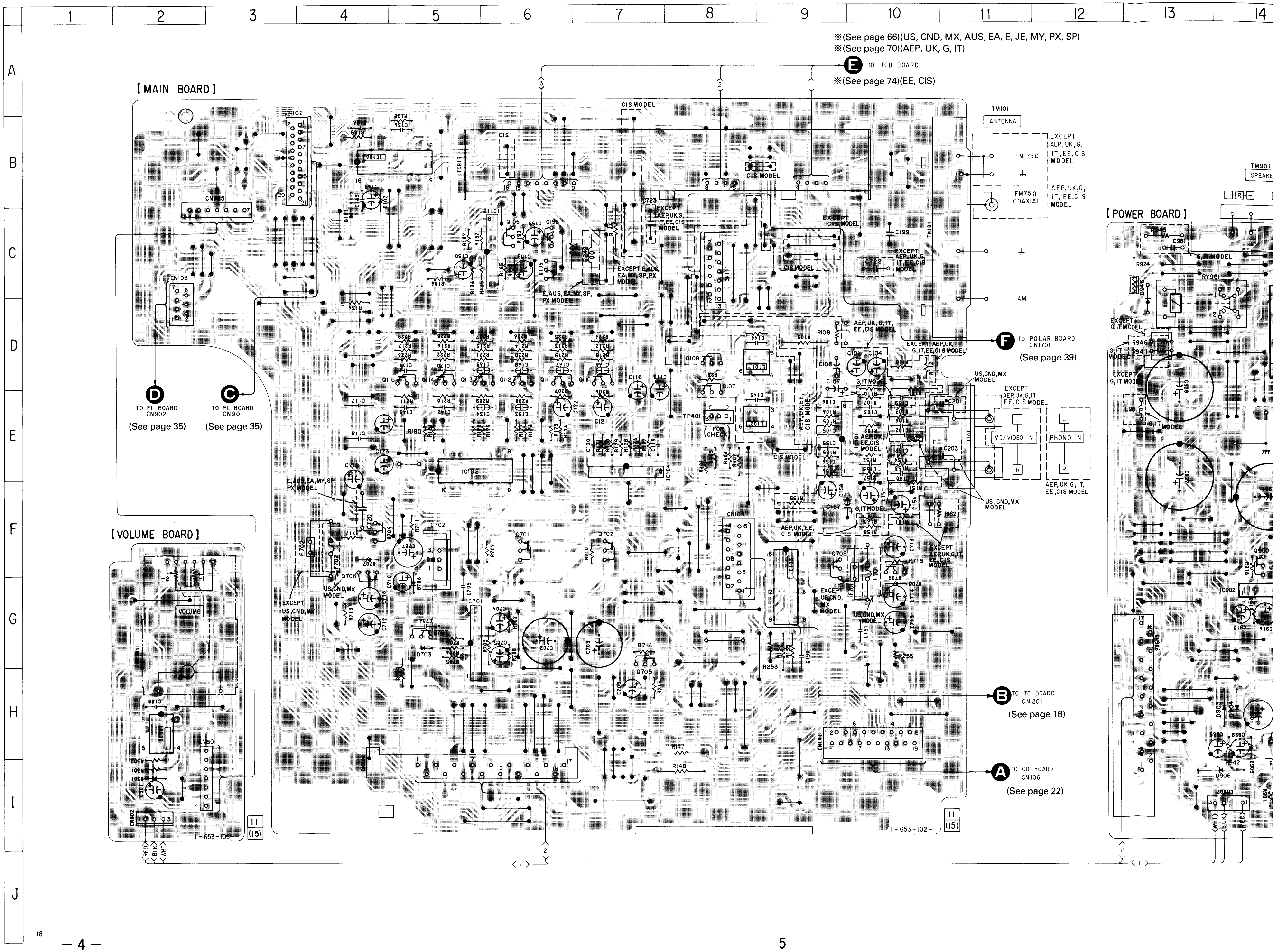
Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▨ : Pattern on the side which is seen.

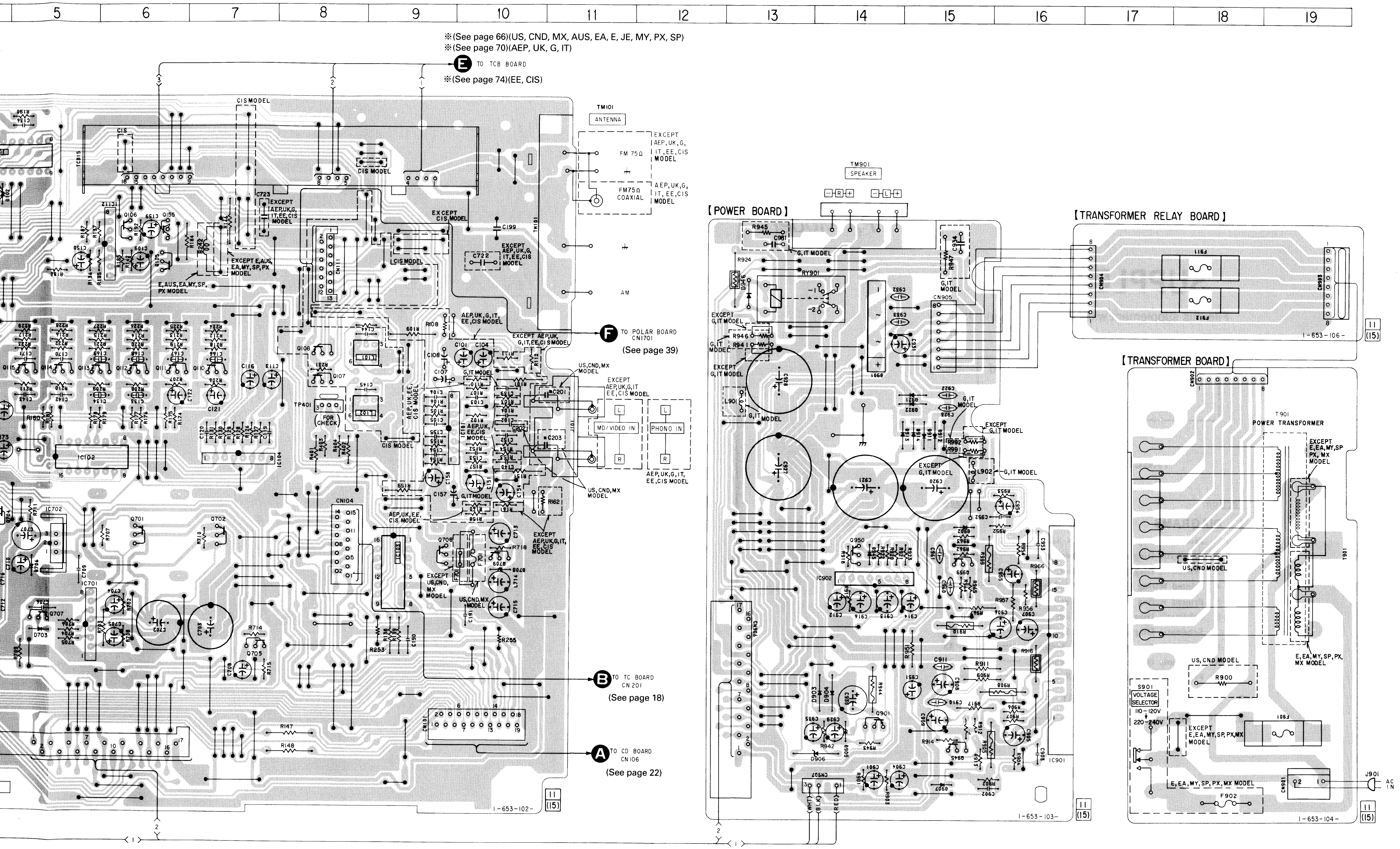
- Abbreviations

AUS : Australian
CND : Canadian
EA : Saudi Arabia
EE : East European
G : German
IT : Italian
MY : Malaysia
MX : Mexican
SP : Singapore

- Pages marked with ※ indicate pages in original service manual.

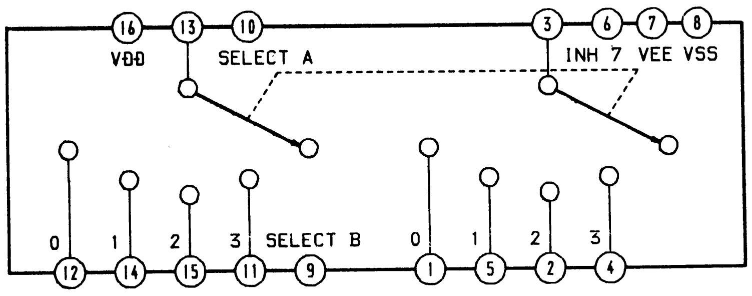

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
※(See page 66)(US, CND, MX, AUS, EA, E, JE, MY, PX, SP)
※(See page 70)(AEP, UK, G, IT)
E TO TCB BOARD
※(See page 74)(EE, CIS)
【MAIN BOARD】
CN102
CN105
CN103
IC106
TC815
CIS MODEL
CIS
EXCEPT AEP,UK,G,IT,EE,CIS MODEL
EXCEPT E,AUS,EA,MY,SP,PX MODEL
E,AUS,EA,MY,SP,PX MODEL
CN111
EXCEPT CIS MODEL
TM101
ANTENNA
FM 75Ω
FM75Ω COAXIAL
EXCEPT AEP,UK,G,IT,EE,CIS MODEL
AEP,UK,G,IT,EE,CIS MODEL
AM
C199
C722
CIS MODEL
AEP,UK,G,IT,EE,CIS MODEL
F TO POLAR BOARD CN1701
(See page 39)
EXCEPT AEP,UK,G,IT,EE,CIS MODEL
US,CND,MX MODEL
EXCEPT AEP,UK,G,IT EE,CIS MODEL
MD/VIDEO IN
PHONO IN
AEP,UK,G,IT,EE,CIS MODEL
US,CND,MX MODEL
G,IT MODEL
D TO FL BOARD CN902
(See page 35)
C TO FL BOARD CN901
(See page 35)
TP401
FOR CHECK
IC102
IC104
IC101
IC103
CN104
E,AUS,EA,MY,SP,PX MODEL
EXCEPT US,CND,MX MODEL
US,CND,MX MODEL
IC702
IC701
Q701
Q702
Q705
Q706
Q707
Q708
D703
EXCEPT US,CND,MX MODEL
US,CND,MX MODEL
EXCEPT AEP,UK,G,IT,EE,CIS MODEL
B TO TC BOARD CN201
(See page 18)
A TO CD BOARD CN106
(See page 22)
CN101
CN701
R147
R148
R253
R255
R714
1-653-102-
11 (15)
【VOLUME BOARD】
VOLUME
RV301
M
IC301
CN801
CN802
(RED)
(BLK)
(WHT)
1-653-105-
11 (15)
TM901
SPEAKE
【POWER BOARD】
R945
C981
G,IT MODEL
R924
RY901
EXCEPT G,IT MODEL
R946
G,IT MODEL
R941
EXCEPT G,IT MODEL
L901
G,IT MODEL
Q950
IC902
D903
D904
R942
D906
CN907
(WHT)
(BLK)
(RED)
18

ctor Lead Layouts in original service manual.


5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
※(See page 66)(US, CND, MX, AUS, EA, E, JE, MY, PX, SP)
※(See page 70)(AEP, UK, G, IT)
E TO TCB BOARD
※(See page 74)(EE, CIS)
TM101
ANTENNA
FM 75Ω
EXCEPT AEP, UK, G, IT, EE, CIS MODEL
FM75Ω COAXIAL
AEP, UK, G, IT, EE, CIS MODEL
AM
F TO POLAR BOARD CN1701
(See page 39)
MD/VIDEO IN
PHONO IN
AEP, UK, G, IT, EE, CIS MODEL
US, CND, MX MODEL
TP401
FOR CHECK
B TO TC BOARD CN 201
(See page 18)
A TO CD BOARD CN 106
(See page 22)
1-653-102-
11 (15)
TM901
SPEAKER
[POWER BOARD]
G, IT MODEL
EXCEPT G, IT MODEL
RY901
IC902
IC901
CN907
(WHT)
(BLK)
(RED)
1-653-103-
11 (15)
[TRANSFORMER RELAY BOARD]
CN904
CN903
F911
F912
1-653-106-
11 (15)
[TRANSFORMER BOARD]
CN902
T901
POWER TRANSFORMER
EXCEPT E, EA, MY, SP, PX, MX MODEL
E, EA, MY, SP, PX, MX MODEL
US, CND MODEL
R900
S901
VOLTAGE SELECTOR
110-120V
220-240V
F901
F902
E, EA, MY, SP, PX, MX MODEL
CN901
J901
AC IN
1-653-104-
11 (15)

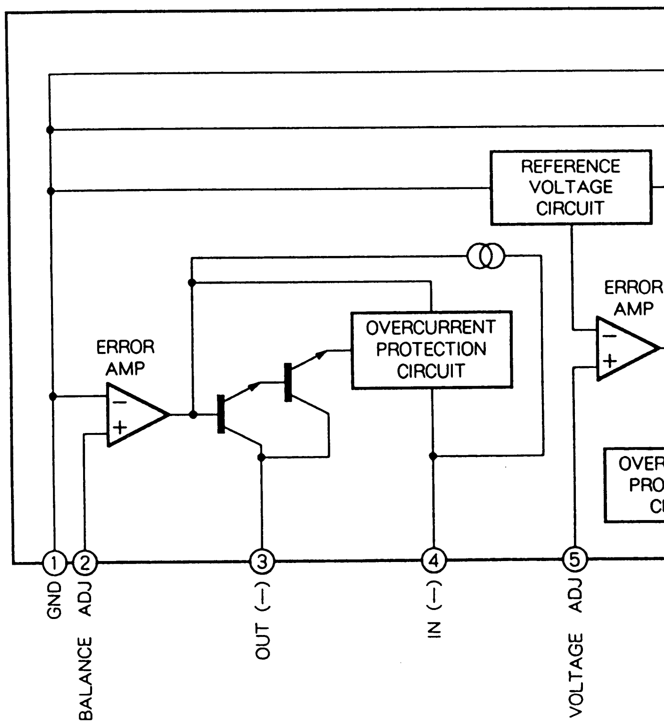
• IC Block Diagrams

IC102, 103 MC14052BCP



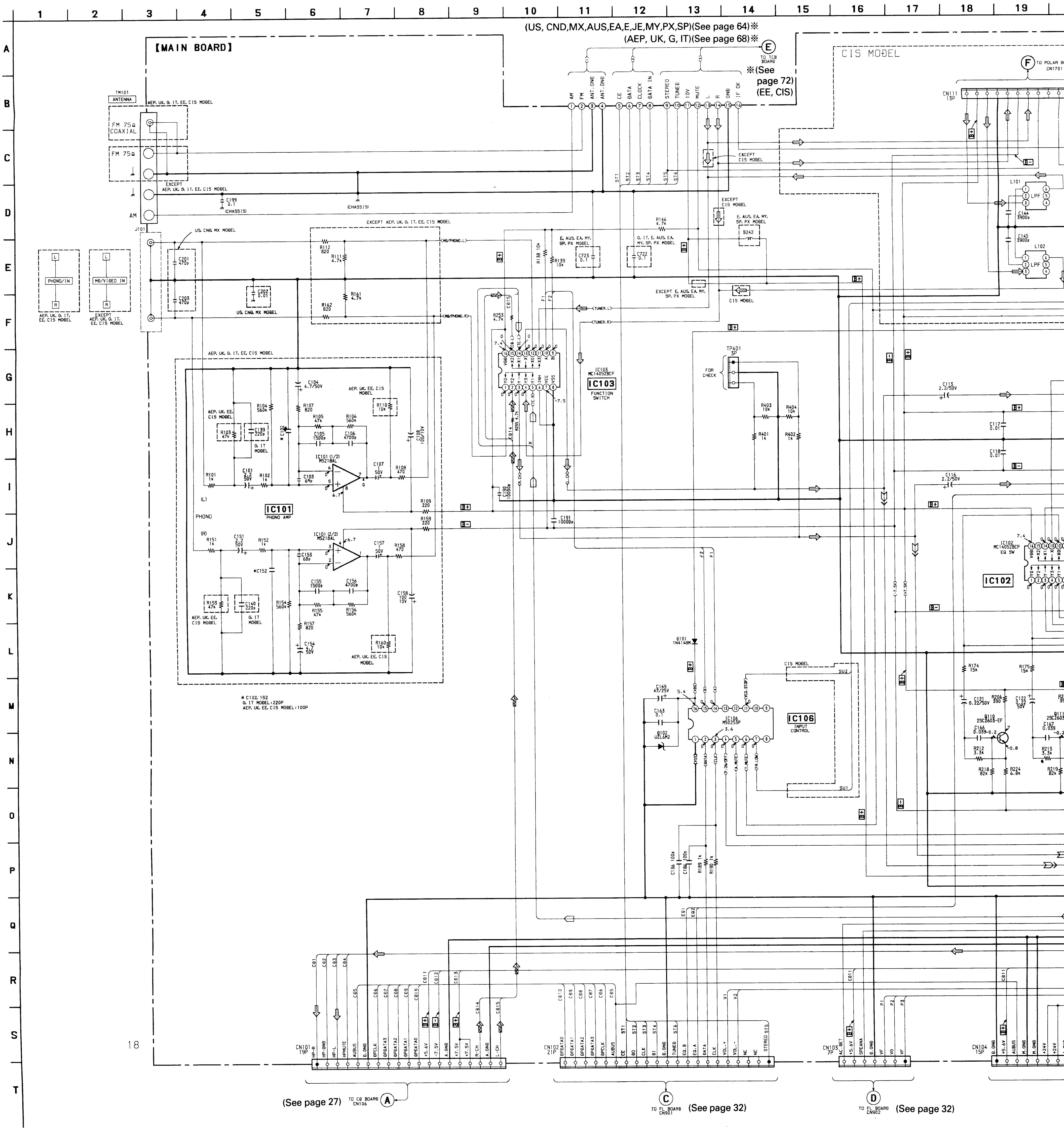
16
13
10
3
6
7
8
VDD
SELECT A
INH 7 VEE VSS
0
1
2
3
SELECT B
12
14
15
11
9
1
5
2
4

IC701 M5230L-A



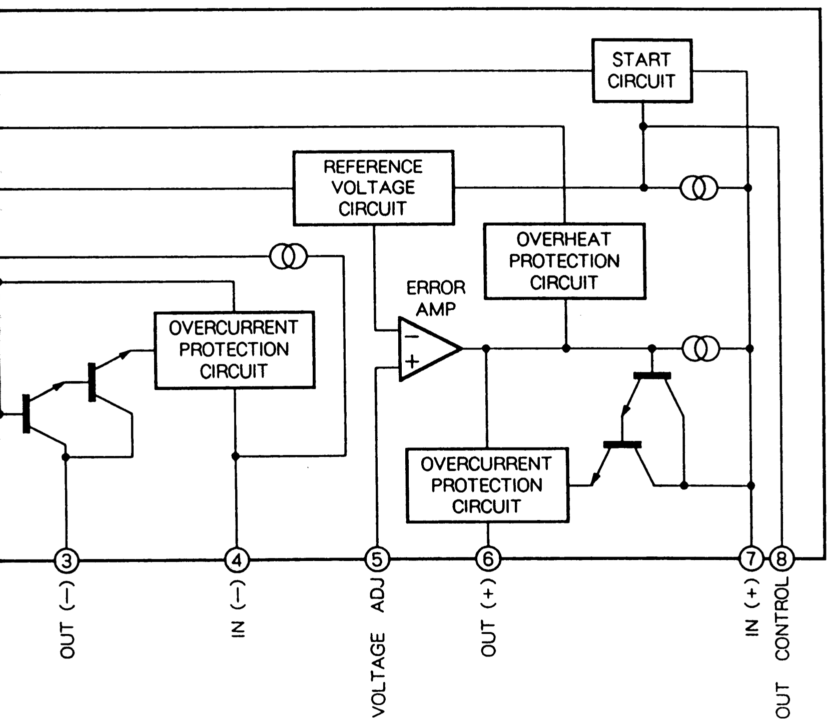
REFERENCE VOLTAGE CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
ERROR AMP
1
2
3
4
5
GND
BALANCE ADJ
OUT (−)
IN (−)
VOLTAGE ADJ

1-2. SCHEMATIC DIAGRAM—MAIN Section—

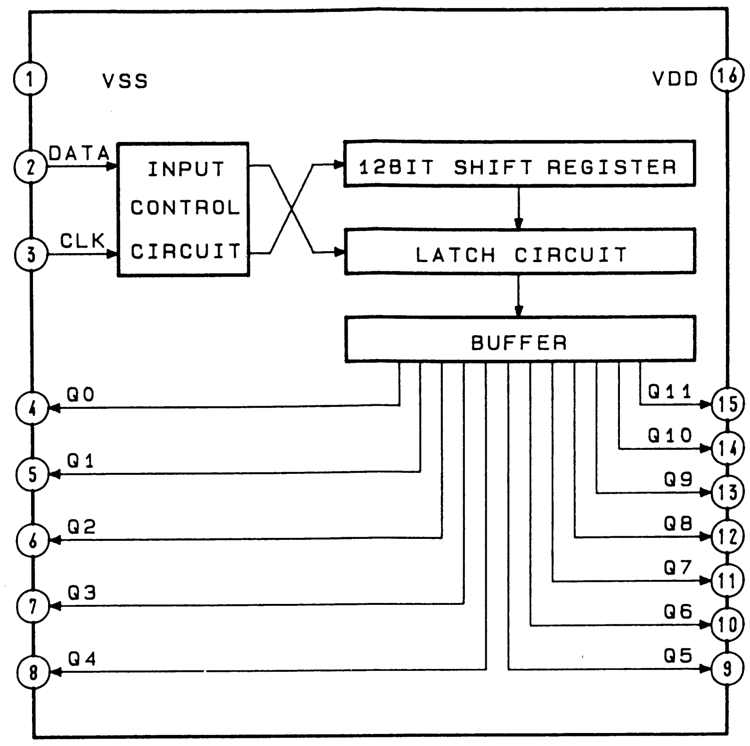


(US, CND,MX,AUS,EA,E,JE,MY,PX,SP)(See page 64)※
(AEP, UK, G, IT)(See page 68)※
E
TO TCB BOARD
※(See page 72)
(EE, CIS)
【MAIN BOARD】
CIS MODEL
F
TO POLAR BOARD
TM101 ANTENNA
FM 75Ω COAXIAL
FM 75Ω
AM
J101
PHONO/IN
MD/VIDEO IN
IC101 PHONO AMP
IC103 MC14052BCP FUNCTION SWITCH
IC106 M50253P INPUT CONTROL
IC102 MC14052BCP EQ SW
TP401 FOR CHECK
CN101 19P
CN102 21P
CN103 7P
CN104 15P
18
(See page 27)
TO CD BOARD CN106
A
C
TO FL BOARD CN901
(See page 32)
D
TO FL BOARD CN902
(See page 32)

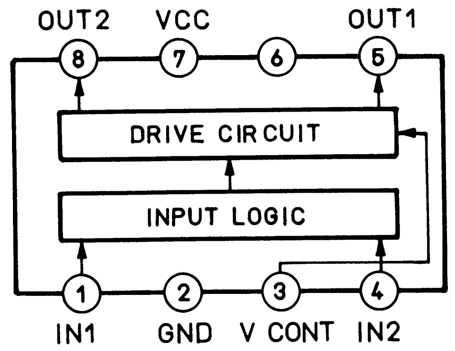
-A

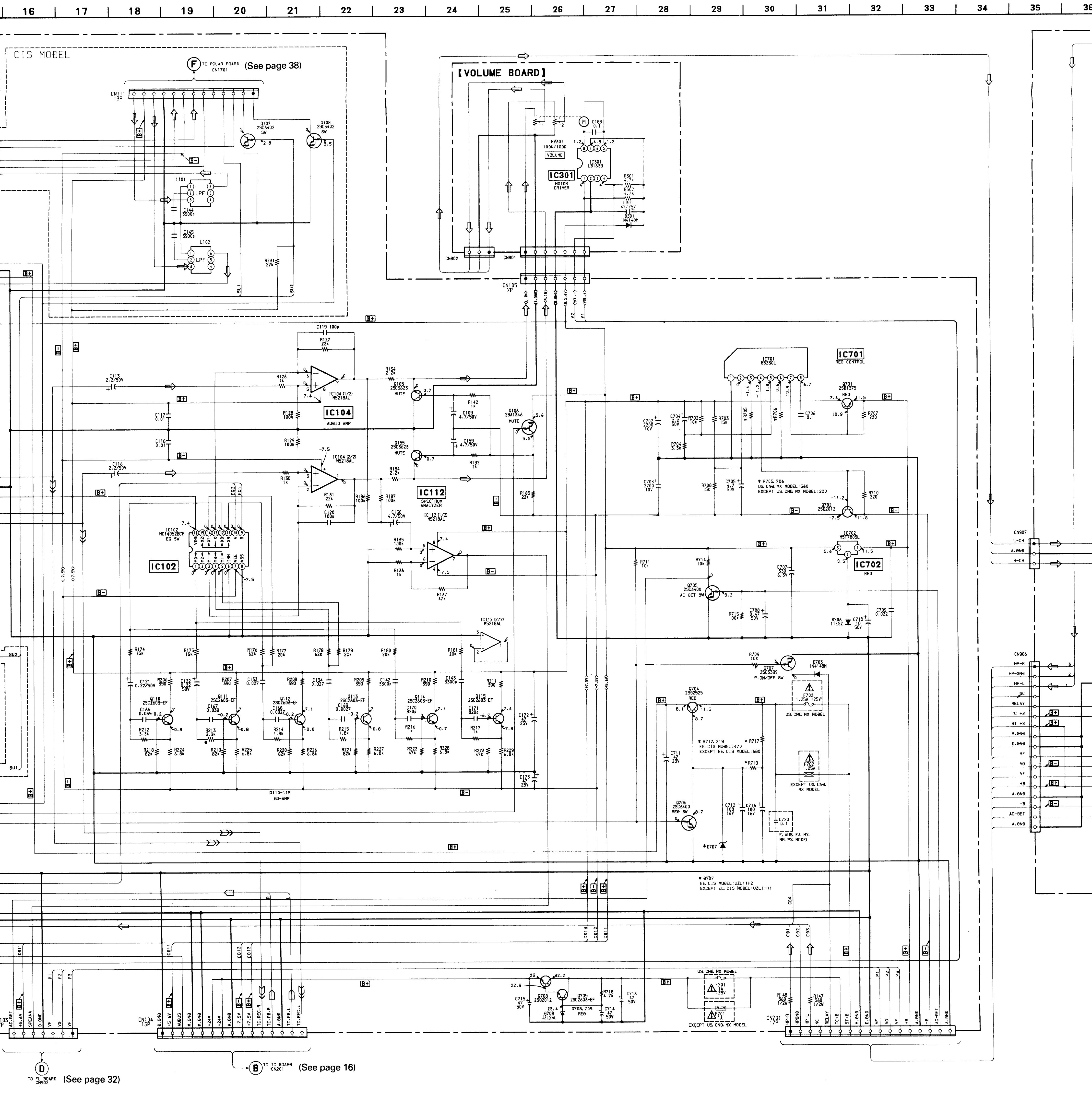

START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
OVERCURRENT PROTECTION CIRCUIT
3 OUT (−)
4 IN (−)
5 VOLTAGE ADJ
6 OUT (+)
7 IN (+)
8 OUT CONTROL

IC106 M50253P

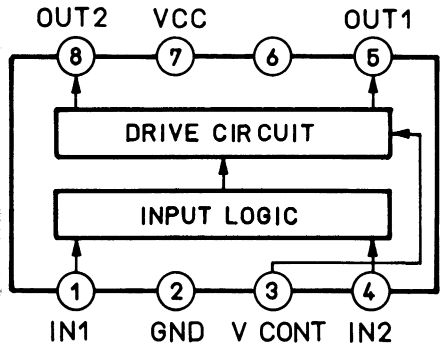

1 VSS
VDD 16
2 DATA
3 CLK
INPUT CONTROL CIRCUIT
12BIT SHIFT REGISTER
LATCH CIRCUIT
BUFFER
4 Q0
5 Q1
6 Q2
7 Q3
8 Q4
Q11 15
Q10 14
Q9 13
Q8 12
Q7 11
Q6 10
Q5 9

IC301 LB1639

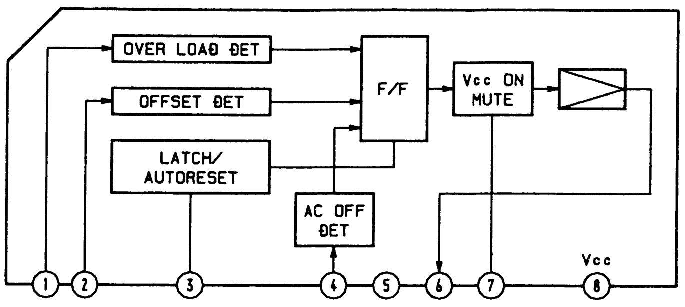

OUT2 8
VCC 7
6
OUT1 5
DRIVE CIRCUIT
INPUT LOGIC
IN1 1
GND 2
V CONT 3
IN2 4


16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
CIS MODEL
F TO POLAR BOARD CN1701 (See page 38)
CN111 13P
Q107 2SC3402 SW
Q108 2SC3402 SW
L101 LPF
L102 LPF
C144 3900p
C145 3900p
R231 22k
【VOLUME BOARD】
RV301 100k/100k VOLUME
C188 0.1
IC301 LB1639
IC301 MOTOR DRIVER
R301 4.7k
R302 4.7k
C301 47/25V
D301 1N4148M
CN802
CN801
CN105 7P
C119 100p
R127 22k
C113 2.2/50V
R126 1k
IC104 (1/2) M5218AL
IC104 AUDIO AMP
R134 2.2k
Q105 2SC3623 MUTE
R142 1k
C109 4.7/50V
Q106 2SA1346 MUTE
Q155 2SC3623 MUTE
C159 4.7/50V
R192 1k
R128 100k
R129 100k
C117 0.01
C118 0.01
C116 2.2/50V
R130 1k
IC104 (2/2) M5218AL
R131 22k
C120 100p
R184 2.2k
R186 100k
R187 100k
IC112 SPECTRUM ANALYZER
IC112 (1/2) M5218AL
C150 4.7/50V
R185 22k
R135 100k
R136 1k
R137 47k
IC102 MC14052BCP EQ SW
IC102
IC112 (2/2) M5218AL
R174 15k
R175 15k
R176 62k
R177 20k
R178 62k
R179 20k
R180 20k
R181 20k
C121 0.22/50V
R206 390
C122 0.22/50V
R207 390
C133 0.027
R208 390
C134 0.027
R209 390
C142 3300p
R210 390
C143 3300p
R211 390
Q110 2SC2603-EF
Q111 2SC2603-EF
Q112 2SC2603-EF
Q113 2SC2603-EF
Q114 2SC2603-EF
Q115 2SC2603-EF
C166 0.039
C167 0.039
C168 0.0027
C169 0.0027
C170 820p
C171 820p
R212 3.3k
R213 3.3k
R214 1.8k
R215 1.8k
R216 1k
R217 1k
R218 82k
R224 6.8k
R219 82k
R225 6.8k
R220 82k
R226 6.8k
R221 82k
R227 6.8k
R222 47k
R228 6.8k
R223 47k
R229 6.8k
C172 47 25V
C173 47 25V
Q110-115 EQ-AMP
IC701 M5230L
IC701 REG CONTROL
Q701 2SB1375 REG
R707 220
C702 2200 10V
C704 2.2 50V
R702 10k
R703 15k
R705
R706
C706 0.1
R704 3.3k
C703 2200 10V
R708 15k
C705 4.7 50V
* R705, 706 US, CND, MX MODEL:560 EXCEPT US, CND, MX MODEL:220
R710 220
Q702 2SB2012
IC702 M5F7805L
IC702 REG
R711 10k
R714 10k
C707 330 6.3V
Q705 2SC5400 AC DET SW
R715 100k
C708 3.3 50V
D706 11ES2
C710 10 50V
C709 0.022
R709 10k
Q707 2SC5399 P.ON/OFF SW
D703 1N4148M
F702 1.25A 125V
US, CND, MX MODEL
Q704 2SD2525 REG
* R717, 719 EE, CIS MODEL:470 EXCEPT EE, CIS MODEL:680
* R717
* R719
C711 47 25V
F702 1.25A
EXCEPT US, CND, MX MODEL
Q706 2SC5400 REG SW
C712 100 16V
C716 100 16V
C720 0.1
E, AUS, EA, MY, SP, PX MODEL
* D707
* D707 EE, CIS MODEL:UZL11H2 EXCEPT EE, CIS MODEL:UZL11H1
CN907
L-CH
A.GND
R-CH
CN906
HP-R
HP-GND
HP-L
NC
RELAY
TC +B
ST +B
M.GND
D.GND
VF
VG
VF
+B
A.GND
-B
AC-DET
A.GND
CN103 7P
AC.DET
+5.6V
SPEANA
D.GND
VF
VG
VF
CN104 15P
D.GND
+5.6V
AUBUS
M.GND
+24V
+24V
A.GND
-7.5V
+7.5V
TC.REC.R
TC.PB.R
A.GND
TC.PB.L
TC.REC.L
D TO FL BOARD CN902 (See page 32)
B TO TC BOARD CN201 (See page 16)
Q708 2SB2012
Q709 2SC2603-EF
Q708, 709 REG
D708 UZL24L
C715 47 50V
R718 4.7k
C713 47 50V
C714 47 50V
US, CND, MX MODEL
F701 1A 125V
F701 1A
EXCEPT US, CND, MX MODEL
R148 560 1/2W
R147 560 1/2W
CN701 17P

IC301 LB1639


OUT2
VCC
OUT1
8
7
6
5
DRIVE CIRCUIT
INPUT LOGIC
1
2
3
4
IN1
GND
V CONT
IN2

IC902 μPC1237HA

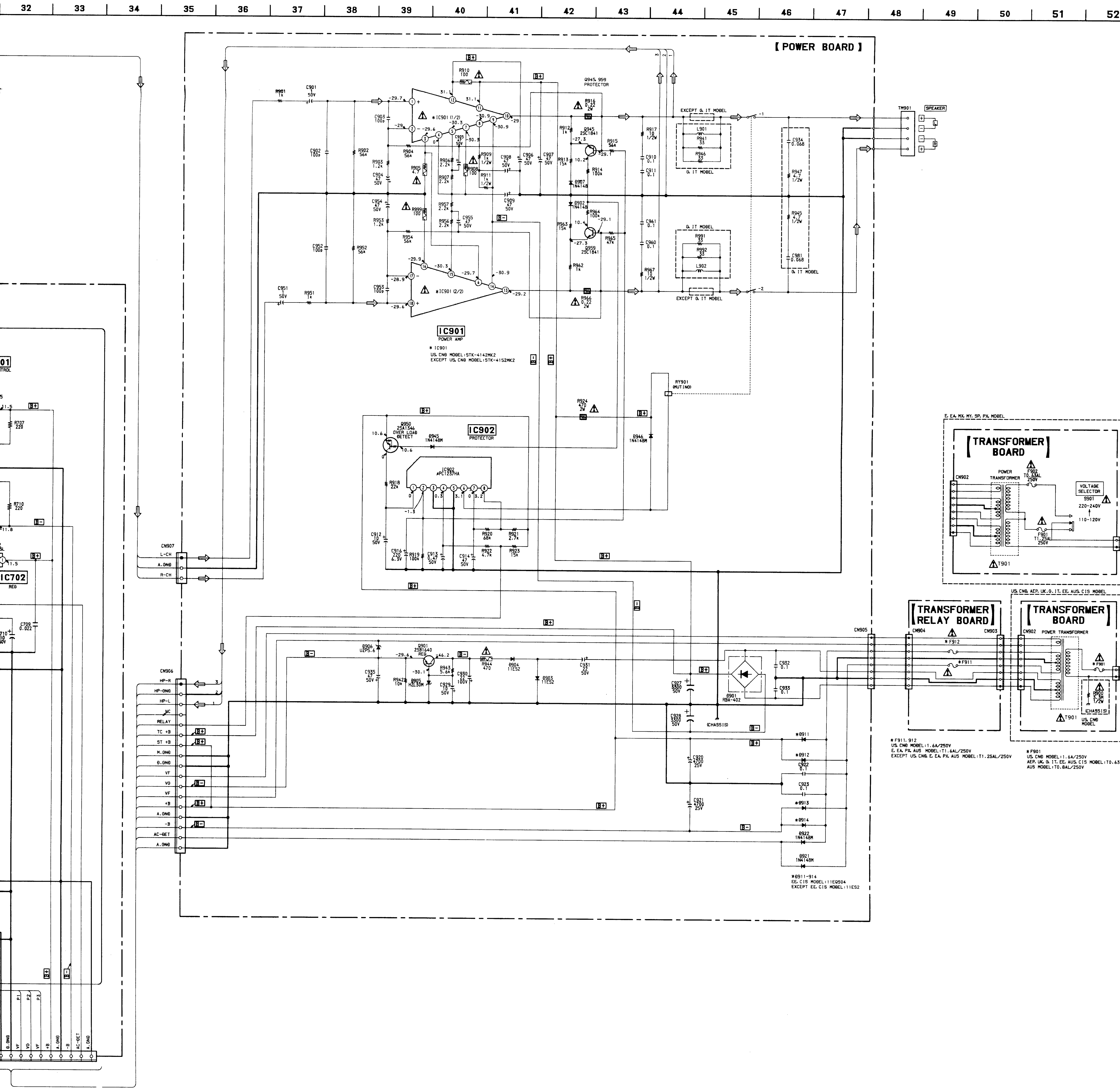

OVER LOAD DET
OFFSET DET
LATCH/
AUTORESET
F/F
Vcc ON
MUTE
AC OFF
DET
Vcc
1
2
3
4
5
6
7
8

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμ 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in Ω and ¹/₄W or less unless otherwis specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés p une marque ⚠ sont critiqu pour la sécurité. Ne les remplacer que par u pièce portant le numéro spé fié.

- B+ : B+ Line
- B– : B– Line
- Voltage is dc with respect to ground under no-signal cond no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - ⇨ : FM ⇨ : REC (DECK B)
  - ⇨ : CD ▷ : PB (DECK B)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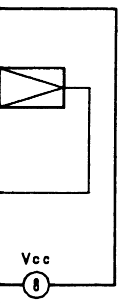
51
52
【POWER BOARD】
IC901
POWER AMP
* IC901
US, CND MODEL: STK-4142MK2
EXCEPT US, CND MODEL: STK-4152MK2
IC902
PROTECTOR
Q950
2SA1846
OVER LOAD DETECT
Q945, 959
PROTECTOR
RY901
(MUTING)
TM901
SPEAKER
EXCEPT G, IT MODEL
G, IT MODEL
CN907
L-CH
A.GND
R-CH
CN906
HP-R
HP-GND
HP-L
NC
RELAY
TC +B
ST +B
M.GND
D.GND
VF
VO
VF
+B
A.GND
-B
AC-DET
A.GND
CN905
IC702
REG
Q901
2SB1640
REG
D901
RBA-402
(CHASSIS)
*D911-914
EE, CIS MODEL: 11EQS04
EXCEPT EE, CIS MODEL: 11ES2
E, EA, MX, MY, SP, PX, MODEL
【TRANSFORMER BOARD】
CN902
POWER TRANSFORMER
F902
T0.63AL 250V
VOLTAGE SELECTOR
S901
220-240V
110-120V
F901
T1.25AL 250V
T901
US, CND, AEP, UK, G, IT, EE, AUS, CIS MODEL
【TRANSFORMER RELAY BOARD】
CN904
CN903
*F912
*F911
*F901
US, CND MODEL
*F911, 912
US, CND MODEL: 1.6A/250V
E, EA, PX, AUS MODEL: T1.6AL/250V
EXCEPT US, CND, E, EA, PX, AUS MODEL: T1.25AL/250V
*F901
US, CND MODEL: 1.6A/250V
AEP, UK, G, IT, EE, AUS, CIS MODEL: T0.63
AUS MODEL: T0.8AL/250V



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

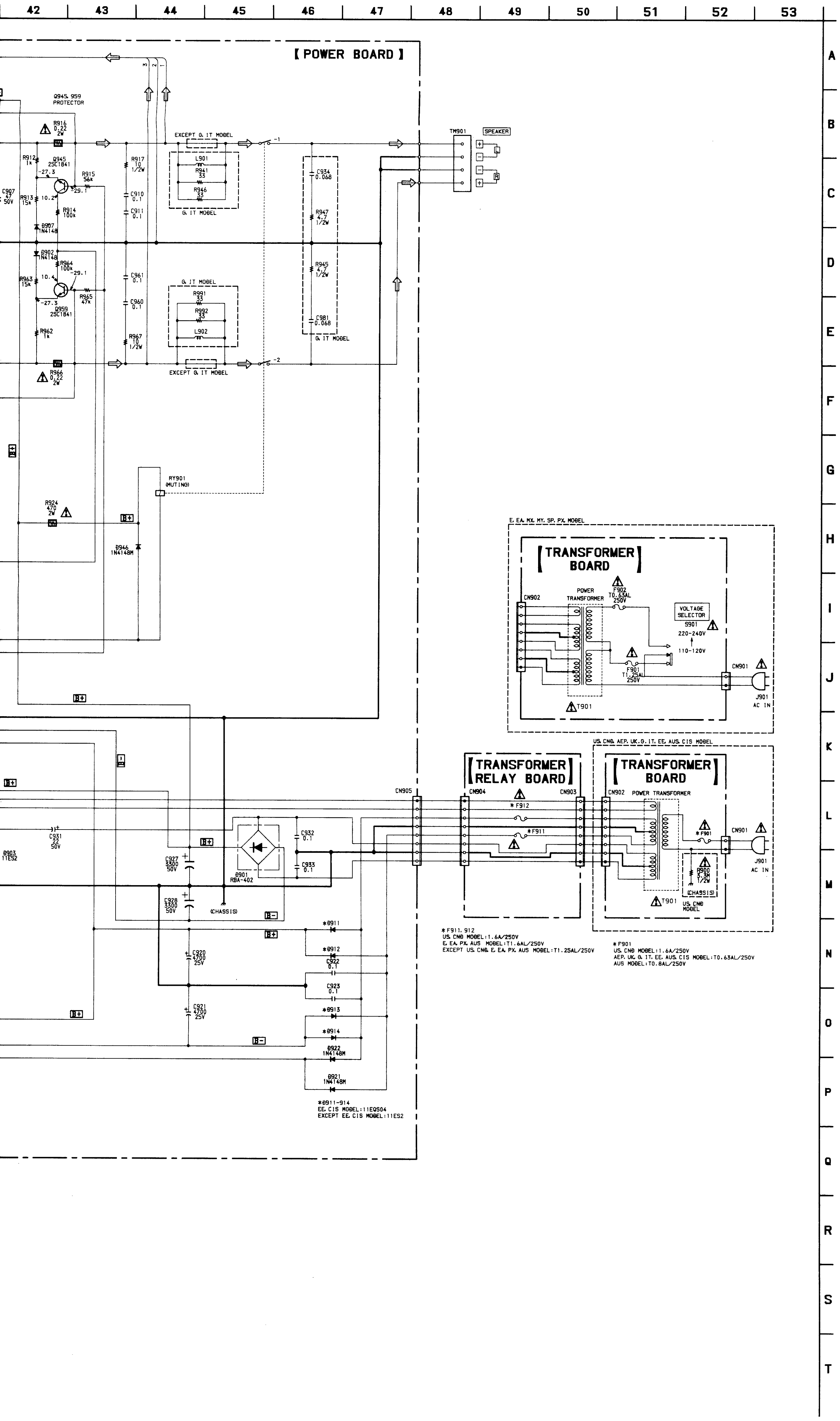
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- Voltage is dc with respect to ground under no-signal condition. no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ➤ : REC (DECK B)
  ➾ : CD ▷ : PB (DECK B)

- **Abbreviations**

AUS : Australian
CND : Canadian
EA : Saudi Arabia
EE : East European
G : German
IT : Italian
MY : Malaysia
MX : Mexican
SP : Singapore

- Pages marked with ※ indicate pages in original service manual.


42
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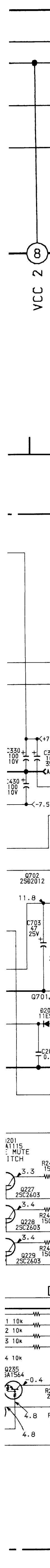
45
46
47
48
49
50
51
52
53
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
[POWER BOARD]
Q945, 959 PROTECTOR
R916 0.22 2W
Q945 2SC1841
Q959 2SC1841
R966 0.22 2W
EXCEPT G, IT MODEL
G, IT MODEL
L901
L902
R941 33
R946 33
R991 33
R992 33
R917 10 1/2W
R967 10 1/2W
C910 0.1
C911 0.1
C961 0.1
C960 0.1
C934 0.068
C981 0.068
R947 4.7 1/2W
R945 4.7 1/2W
TM901
SPEAKER
RY901 (MUTING)
R924 470 2W
D946 1N4148M
E, EA, MX, MY, SP, PX MODEL
TRANSFORMER BOARD
POWER TRANSFORMER
CN902
F902 T0.63AL 250V
F901 T1.25AL 250V
VOLTAGE SELECTOR
S901
220-240V
110-120V
CN901
J901 AC IN
T901
US, CND, AEP, UK, G, IT, EE, AUS, CIS MODEL
TRANSFORMER RELAY BOARD
CN904
CN903
CN905
*F912
*F911
*F901
C900 0.01 1/2W
(CHASSIS)
US, CND MODEL
D901 RBA-402
C932 0.1
C933 0.1
C927 3300 50V
C928 3300 50V
C920 4700 25V
C921 4700 25V
C922 0.1
C923 0.1
*D911
*D912
*D913
*D914
D922 1N4148M
D921 1N4148M
*D911-914
EE, CIS MODEL:11EQS04
EXCEPT EE, CIS MODEL:11ES2
*F911, 912
US, CND MODEL:1.6A/250V
E, EA, PX, AUS MODEL:T1.6AL/250V
EXCEPT US, CND, E, EA, PX, AUS MODEL:T1.25AL/250V
*F901
US, CND MODEL:1.6A/250V
AEP, UK, G, IT, EE, AUS, CIS MODEL:T0.63AL/250V
AUS MODEL:T0.8AL/250V


8
VCC 2
Q702 2SD2012
11.8
C703 47 25V
Q701
Q227 2SC2603
Q228 2SC2603
Q229 2SC2603
MUTE
Q235
-0.4
4.8

Note on Schematic Diagram:

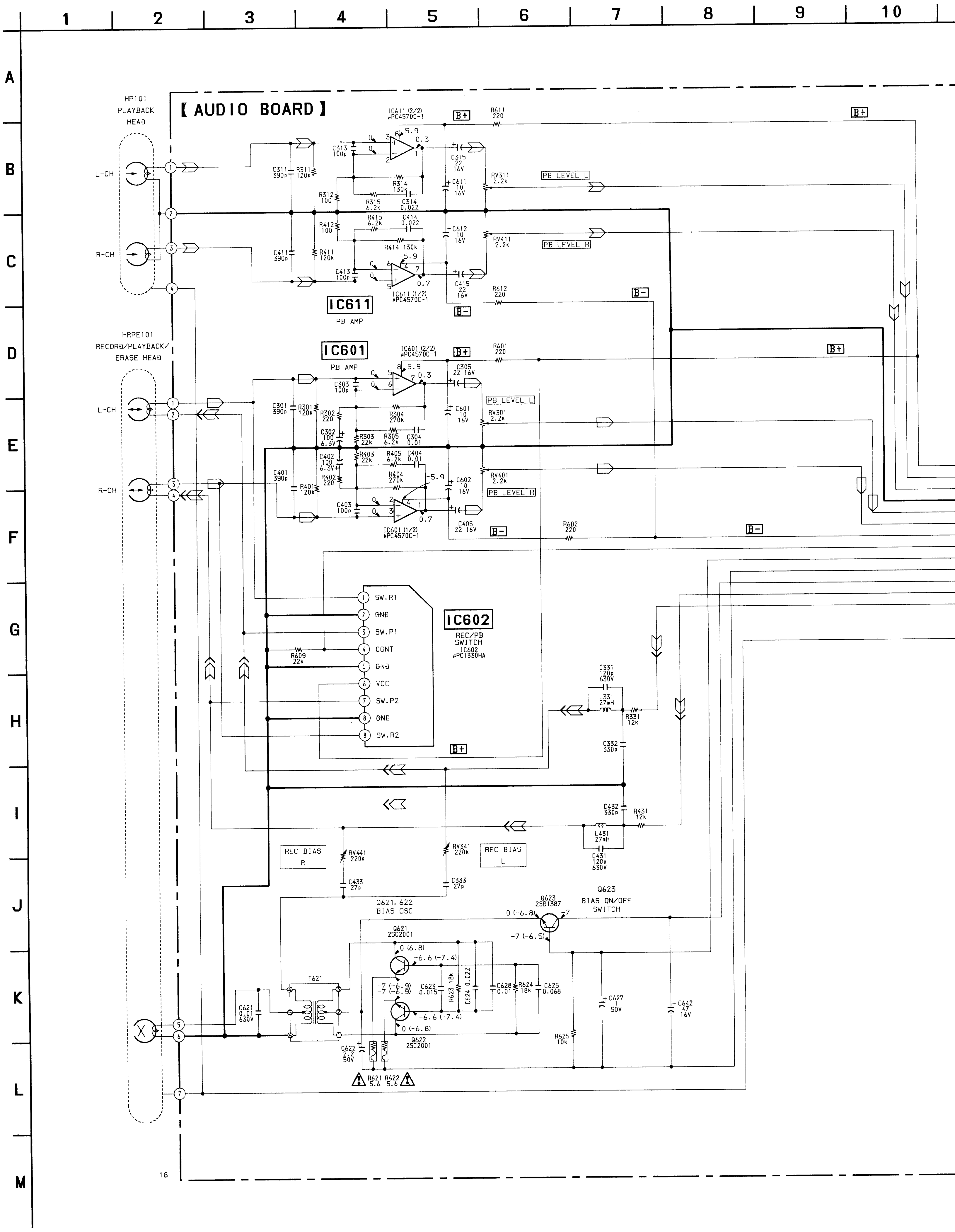
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹⁄₄ W or less unless otherwise specified.
- ⊣∿⊢ : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B− : B− Line
- ▭ : adjustment for repair.

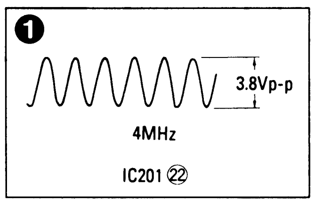
- Voltage and waveforms are dc with respect to groun under no-signal conditions.
  no mark : PLAY BACK
  ( ) : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ Voltage variations may be noted due to normal produ tion tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal produ tion tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM　 ⊃ : PB (DECK A)
  ⊃⊃ : REC (DECK B)
  ▷ : PB (DECK B)

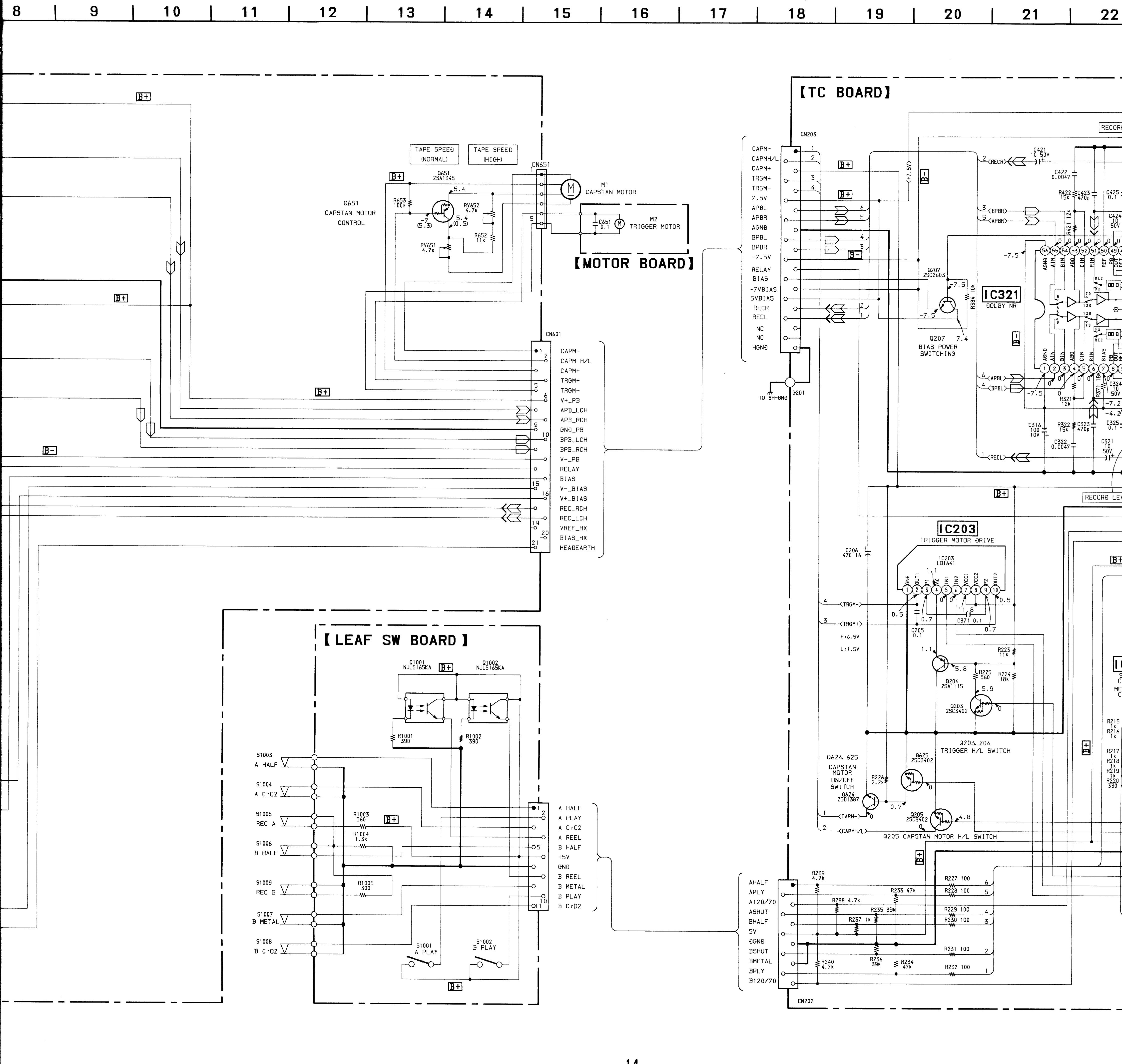
1-3. SCHEMATIC DIAGRAM—TC Section—


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
HP101
PLAYBACK
HEAD
L-CH
R-CH
【AUDIO BOARD】
IC611 (2/2)
μPC4570C-1
IC611 (1/2)
μPC4570C-1
IC611
PB AMP
C313 100p
C311 390p
R311 120k
R312 100
R314 130k
R315 6.2k
C314 0.022
R415 6.2k
C414 0.022
R412 100
R414 130k
C411 390p
R411 120k
C413 100p
C315 22 16V
C611 10 16V
C612 10 16V
C415 22 16V
R611 220
R612 220
RV311 2.2k
RV411 2.2k
PB LEVEL L
PB LEVEL R
B+
B−
HRPE101
RECORD/PLAYBACK/
ERASE HEAD
IC601
PB AMP
IC601 (2/2)
μPC4570C-1
IC601 (1/2)
μPC4570C-1
C303 100p
C301 390p
R301 120k
R302 220
R304 270k
C302 100 6.3V
R303 22k
R305 6.2k
C304 0.01
C402 100 6.3V
R403 22k
R405 6.2k
C404 0.01
R404 270k
R402 220
C401 390p
R401 120k
C403 100p
C305 22 16V
C601 10 16V
C602 10 16V
C405 22 16V
R601 220
R602 220
RV301 2.2k
RV401 2.2k
IC602
REC/PB
SWITCH
IC602
μPC1330HA
SW.R1
GND
SW.P1
CONT
GND
VCC
SW.P2
GND
SW.R2
R609 22k
C331 120p 630V
L331 27mH
R331 12k
C332 330p
C432 330p
R431 12k
L431 27mH
C431 120p 630V
REC BIAS R
REC BIAS L
RV441 220k
RV341 220k
C433 27p
C333 27p
Q621, 622
BIAS OSC
Q623
2SD1387
Q623
BIAS ON/OFF
SWITCH
0 (-6.8)
-7
-7 (-6.5)
Q621
2SC2001
0 (6.8)
-6.6 (-7.4)
-7 (-6.9)
-7 (-6.9)
0 (-6.8)
Q622
2SC2001
T621
C621 0.01 630V
C622 2.2 50V
C623 0.015
R623 18k
C624 0.022
C628 0.01
R624 18k
C625 0.068
C627 1 50V
C642 47 16V
R625 10k
R621 5.6
R622 5.6
5.9
0.3
-5.9
0.7
18

and waveforms are dc with respect to ground
o-signal conditions.
: PLAY BACK
): REC
s are taken with a VOM (Input Impedance 10MΩ).
variations may be noted due to normal produc-
rances.
rms are taken with a oscilloscope.
variations may be noted due to normal produc-
rances.
numbers refer to waveforms.
ath.
FM ▷ : PB (DECK A)
▷▷ : REC (DECK B)
▷ : PB (DECK B)

• Waveform


❶
3.8Vp-p
4MHz
IC201 ㉒


8
9
10
11
12
13
14
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16
17
18
19
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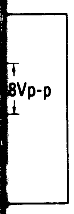
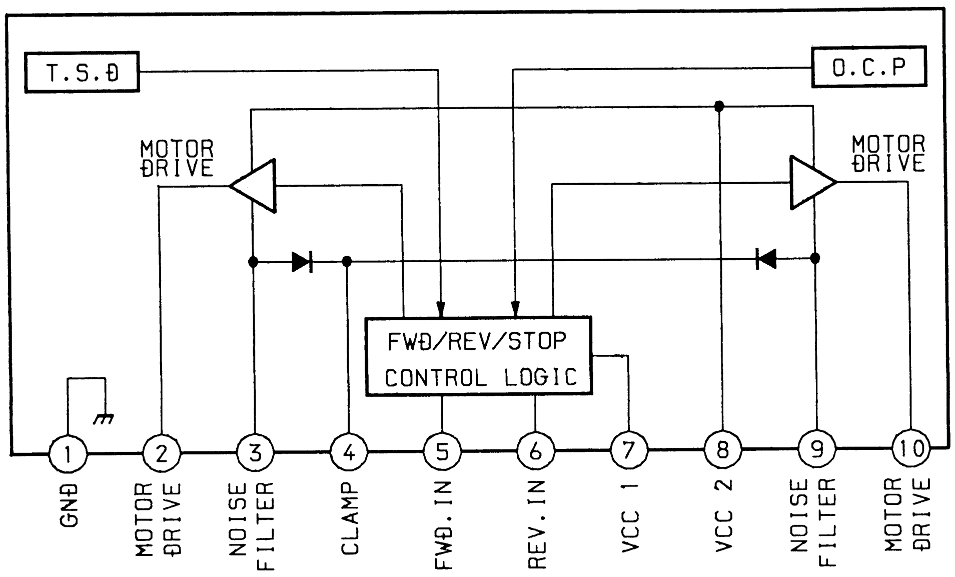
21
22
【MOTOR BOARD】
TAPE SPEED (NORMAL)
TAPE SPEED (HIGH)
Q651 2SA1345
Q651 CAPSTAN MOTOR CONTROL
R653 100k
RV652 4.7k
RV651 4.7k
R652 11k
CN651
M1 CAPSTAN MOTOR
M2 TRIGGER MOTOR
C651 0.1
CN601
CAPM-
CAPM H/L
CAPM+
TRGM+
TRGM-
V+_PB
APB_LCH
APB_RCH
GND_PB
BPB_LCH
BPB_RCH
V-_PB
RELAY
BIAS
V-_BIAS
V+_BIAS
REC_RCH
REC_LCH
VREF_HX
BIAS_HX
HEADEARTH
【LEAF SW BOARD】
Q1001 NJL5165KA
Q1002 NJL5165KA
R1001 390
R1002 390
R1003 560
R1004 1.3k
R1005 300
S1003 A HALF
S1004 A CrO2
S1005 REC A
S1006 B HALF
S1009 REC B
S1007 B METAL
S1008 B CrO2
S1001 A PLAY
S1002 B PLAY
A HALF
A PLAY
A CrO2
A REEL
B HALF
+5V
GND
B REEL
B METAL
B PLAY
B CrO2
【TC BOARD】
CN203
CAPM-
CAPMH/L
CAPM+
TRGM+
TRGM-
7.5V
APBL
APBR
AGND
BPBL
BPBR
-7.5V
RELAY
BIAS
-7VBIAS
5VBIAS
RECR
RECL
NC
NC
HGND
TO SH-GND
G201
Q207 2SC2603
Q207 BIAS POWER SWITCHING
R384 10k
IC321 DOLBY NR
C421 10 50V
C422 0.0047
R422 15k
C423 470p
R421 12k
R321 12k
R322 15k
C323 470p
C316 100 10V
C322 0.0047
C321 10 50V
RECORD
RECORD LEV
IC203 TRIGGER MOTOR DRIVE
IC203 LB1641
C206 470 16
C205 0.1
C371 0.1
H:6.5V
L:1.5V
R223 11k
R225 560
R224 18k
Q204 2SA1115
Q203 2SC3402
Q203, 204 TRIGGER H/L SWITCH
Q624, 625 CAPSTAN MOTOR ON/OFF SWITCH
Q625 2SC3402
Q624 2SD1387
R226 2.2k
Q205 2SC3402
Q205 CAPSTAN MOTOR H/L SWITCH
AHALF
APLY
A120/70
ASHUT
BHALF
5V
DGND
BSHUT
BMETAL
BPLY
B120/70
CN202
R239 4.7k
R238 4.7k
R233 47k
R235 39k
R237 1k
R240 4.7k
R236 39k
R234 47k
R227 100
R228 100
R229 100
R230 100
R231 100
R232 100
R215 1k
R216 1k
R217
R218
R219
R220 330
B+
B-

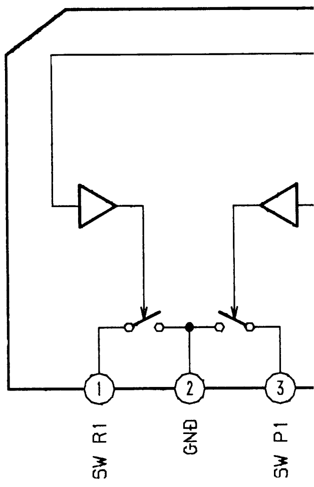


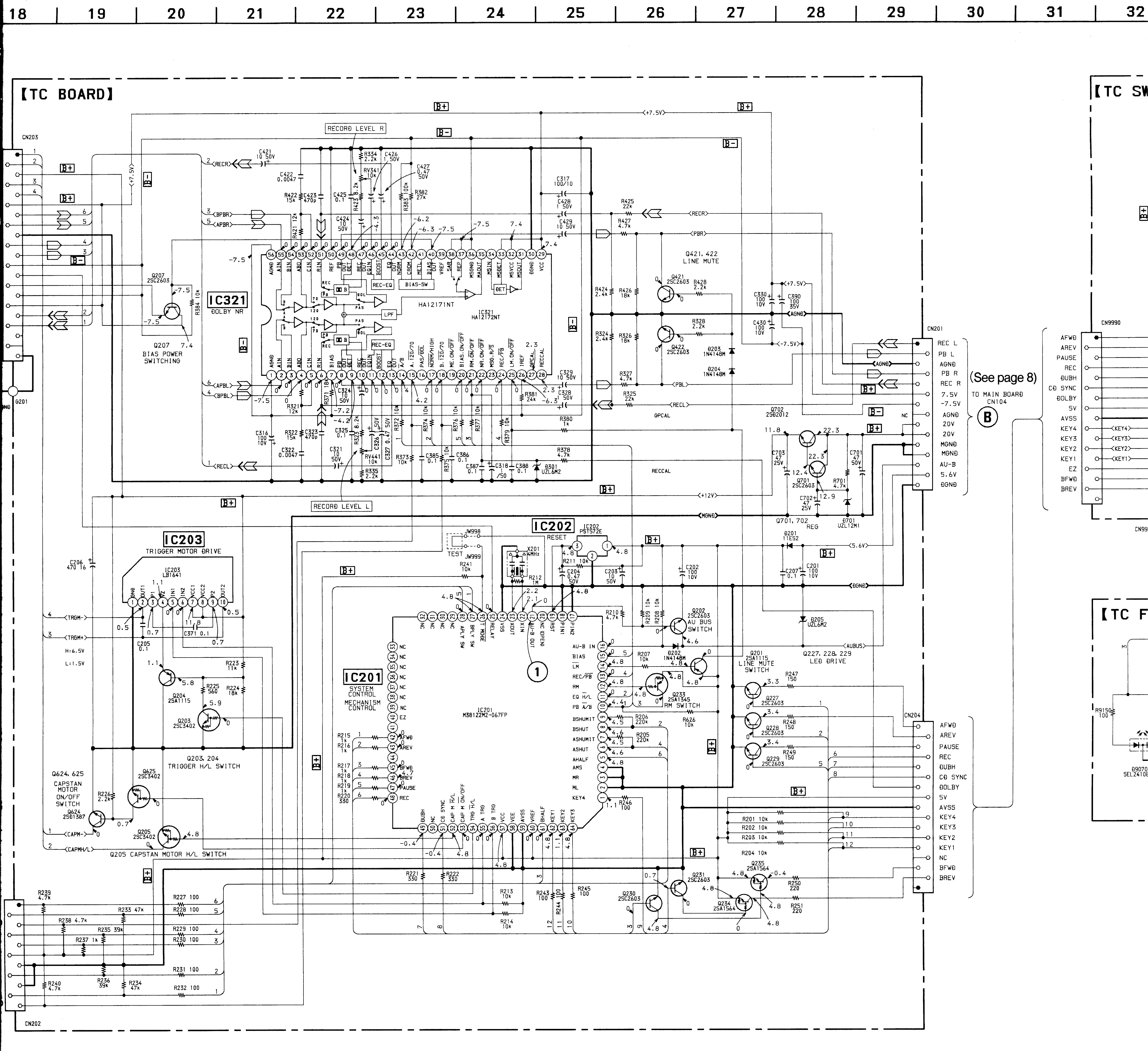
• IC Block Diagrams

IC203 LB1641


T.S.D
O.C.P
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP
5 FWD.IN
6 REV.IN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR DRIVE

IC602 µPC1330HA


1 SW R1
2 GND
3 SW P1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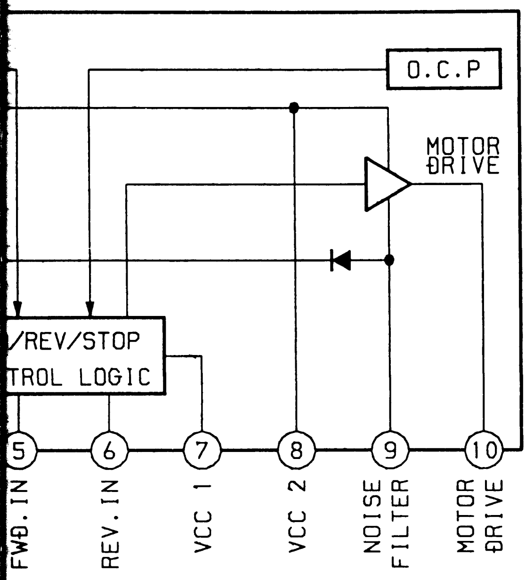
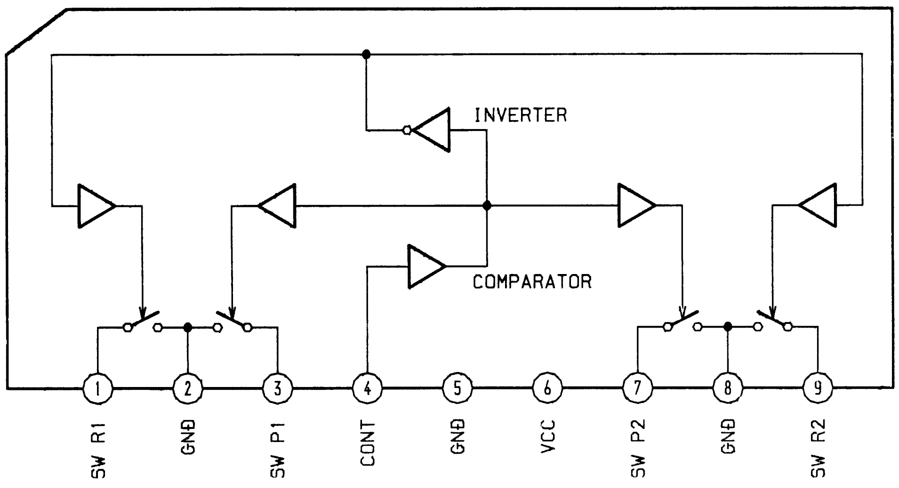
32
【TC BOARD】
【TC SW
【TC F
CN203
CN202
CN201
CN204
CN9990
RECORD LEVEL R
RECORD LEVEL L
IC321
DOLBY NR
HA12171NT
Q207 BIAS POWER SWITCHING
Q421, 422 LINE MUTE
IC203
TRIGGER MOTOR DRIVE
LB1641
Q203, 204 TRIGGER H/L SWITCH
Q624, 625 CAPSTAN MOTOR ON/OFF SWITCH
Q205 CAPSTAN MOTOR H/L SWITCH
IC202 RESET PST572E
IC201
SYSTEM CONTROL MECHANISM CONTROL
M38122M2-067FP
Q202 AU BUS SWITCH
Q201 LINE MUTE SWITCH
Q227, 228, 229 LED DRIVE
Q233 RM SWITCH
Q701, 702 REG
TEST
X201 4MHz
(See page 8)
TO MAIN BOARD CN104
B
REC L
PB L
AGND
PB R
REC R
7.5V
-7.5V
AGND
20V
20V
MGND
DGND
AU-B
5.6V
DGND
AFWD
AREV
PAUSE
REC
DUBH
CD SYNC
DOLBY
5V
AVSS
KEY4
KEY3
KEY2
KEY1
NC
BFWD
BREV
EZ
H: 6.5V
L: 1.5V

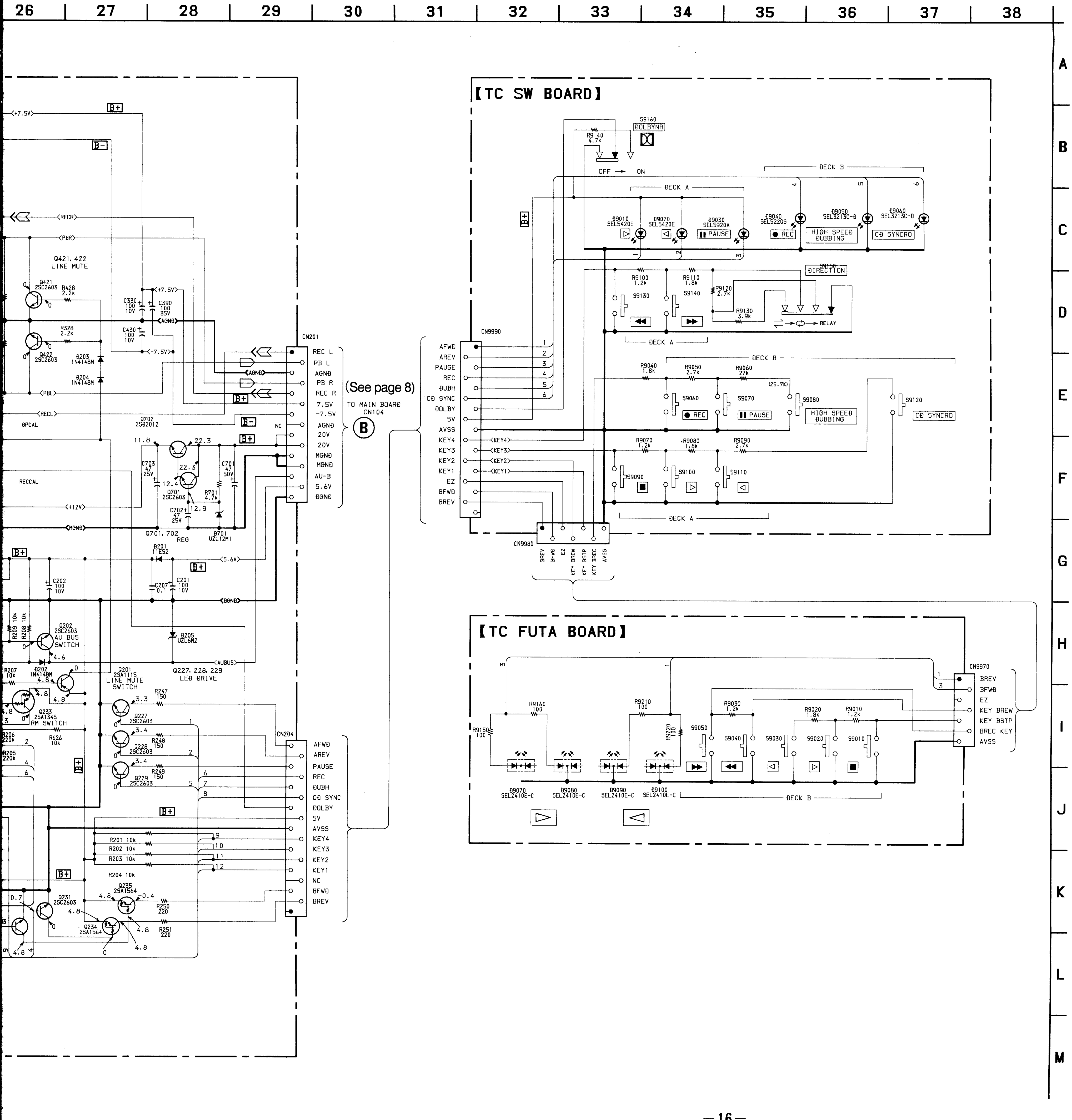


O.C.P
MOTOR DRIVE
/REV/STOP
TROL LOGIC
5
6
7
8
9
10
FWD.IN
REV.IN
VCC 1
VCC 2
NOISE FILTER
MOTOR DRIVE

IC602 μPC1330HA



INVERTER
COMPARATOR
1
2
3
4
5
6
7
8
9
SW R1
GND
SW P1
CONT
GND
VCC
SW P2
GND
SW R2



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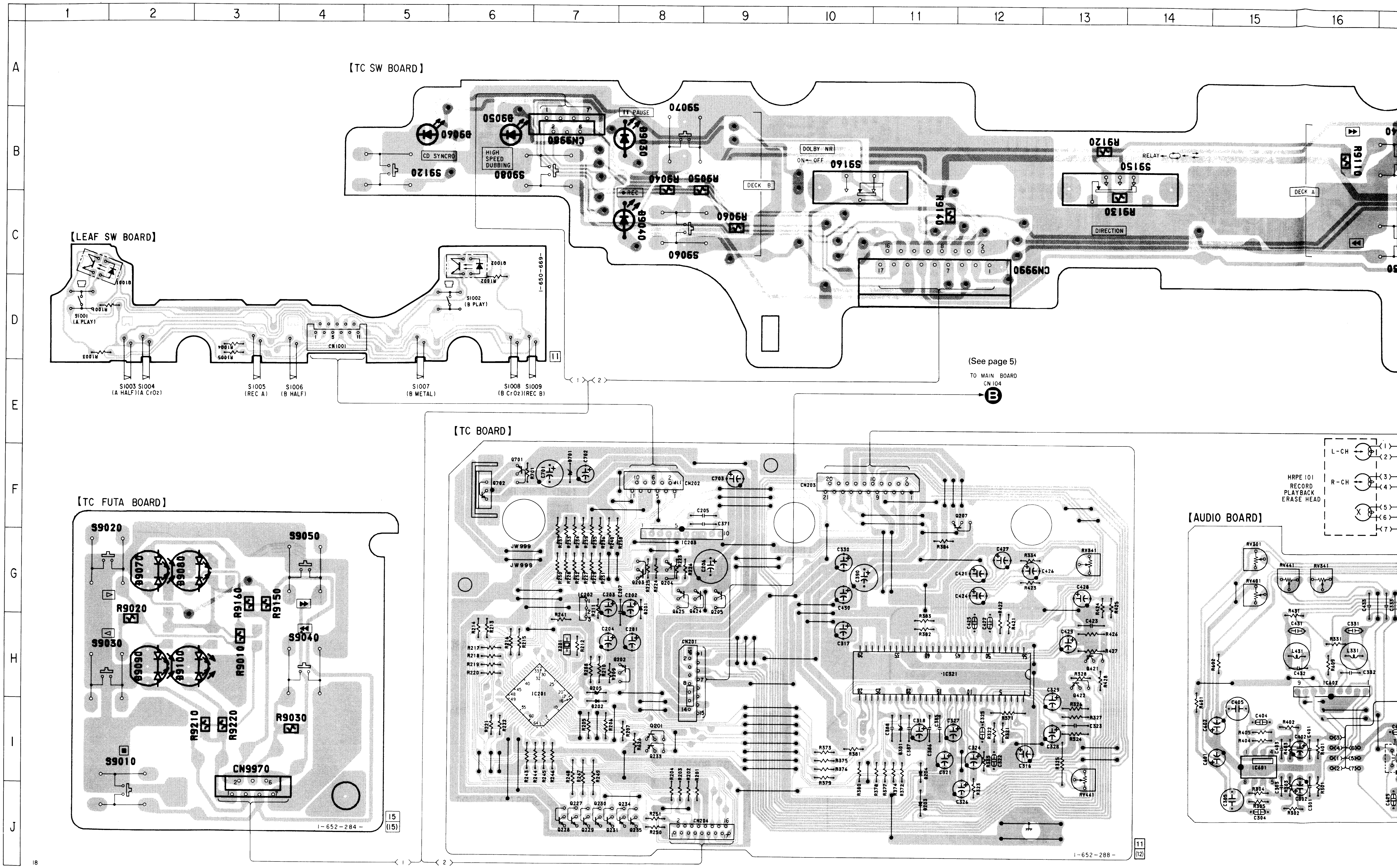
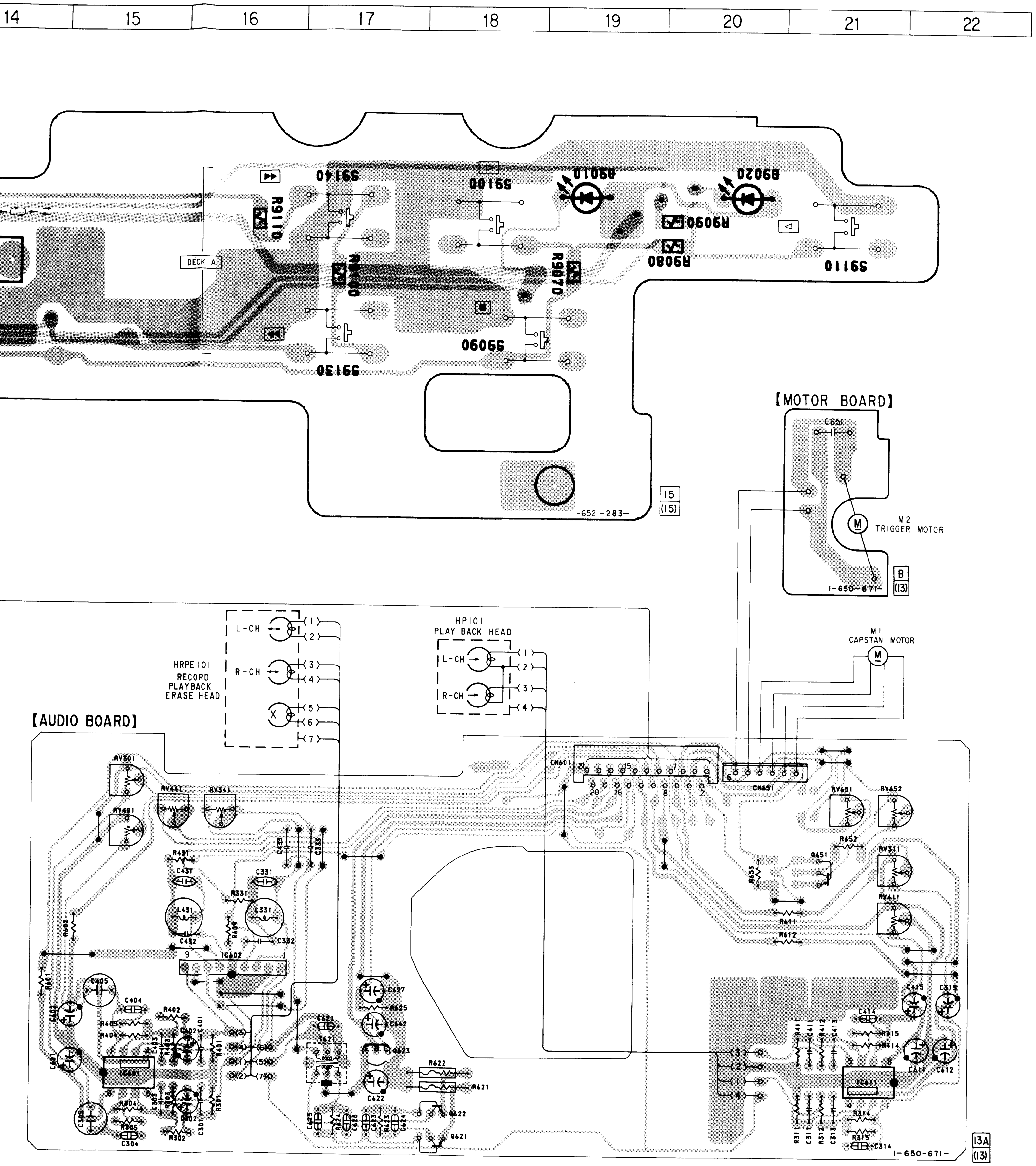
36
37
38
A
B
C
D
E
F
G
H
I
J
K
L
M
+7.5V
B+
B-
RECR
PBR
Q421, 422
LINE MUTE
Q421 2SC2603
R428 2.2k
R328 2.2k
Q422 2SC2603
D203 1N4148M
D204 1N4148M
C330 100 10V
C390 100 35V
C430 100 10V
+7.5V
AGND
-7.5V
PBL
RECL
GPCAL
RECCAL
Q702 2SB2012
11.8
22.3
C703 47 25V
12.4
22.3
C701 47 50V
Q701 2SC2603
R701 4.7k
C702 47 25V
12.9
Q701, 702 REG
D701 UZL12M1
+12V
MGND
D201 11ES2
5.6V
C202 100 10V
C207 0.1
C201 100 10V
BGND
R209 10k
R208 10k
Q202 2SC2603 AU BUS SWITCH
4.6
D205 UZL6M2
AUBUS
R207 10k
D202 1N4148M
Q201 2SA1115 LINE MUTE SWITCH
Q227, 228, 229 LED DRIVE
4.8
Q233 2SA1345 RM SWITCH
R247 150
3.3
Q227 2SC2603
R626 10k
R206 220k
R205 220k
3.4
R248 150
Q228 2SC2603
R249 150
Q229 2SC2603
R201 10k
R202 10k
R203 10k
R204 10k
Q235 2SA1564
-0.4
0.7
Q231 2SC2603
R250 220
Q234 2SA1564
R251 220
CN201
REC L
PB L
AGND
PB R
REC R
7.5V
-7.5V
AGND
20V
20V
MGND
DGND
AU-B
5.6V
BGND
NC
(See page 8)
TO MAIN BOARD CN104
B
CN204
AFWD
AREV
PAUSE
REC
DUBH
CD SYNC
DOLBY
5V
AVSS
KEY4
KEY3
KEY2
KEY1
NC
BFWD
BREV
【TC SW BOARD】
S9160 DOLBYNR
R9140 4.7k
OFF → ON
DECK A
DECK B
D9010 SEL5420E
D9020 SEL5420E
D9030 SEL5920A
D9040 SEL5220S
D9050 SEL3213C-D
D9060 SEL3213C-D
PAUSE
REC
HIGH SPEED DUBBING
CD SYNCRO
S9150 DIRECTION
R9100 1.2k
R9110 1.8k
S9130
S9140
R9120 2.7k
R9130 3.9k
RELAY
CN9990
AFWD
AREV
PAUSE
REC
DUBH
CD SYNC
DOLBY
5V
AVSS
KEY4
KEY3
KEY2
KEY1
EZ
BFWD
BREV
R9040 1.8k
R9050 2.7k
R9060 27k
(25.7k)
S9060
S9070
S9080
S9120
R9070 1.2k
R9080 1.8k
R9090 2.7k
S9090
S9100
S9110
CN9980
BREV
BFWD
EZ
KEY BREW
KEY BSTP
KEY BREC
AVSS
【TC FUTA BOARD】
CN9970
BREV
BFWD
EZ
KEY BREW
KEY BSTP
BREC KEY
AVSS
R9160 100
R9210 100
R9150 100
R9220 100
R9030 1.2k
R9020 1.8k
R9010 1.2k
S9050
S9040
S9030
S9020
S9010
D9070 SEL2410E-C
D9080 SEL2410E-C
D9090 SEL2410E-C
D9100 SEL2410E-C
DECK B

1-4. PRINTED WIRING BOARDS—TC Section— ● See page 25–27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.


【TC SW BOARD】
【LEAF SW BOARD】
【TC FUTA BOARD】
【TC BOARD】
【AUDIO BOARD】
CD SYNCRO
HIGH SPEED DUBBING
TT PAUSE
REC
DOLBY NR
ON ← OFF
DECK B
DECK A
DIRECTION
RELAY
CN9980
CN9990
CN9970
CN1001
S1001 (A PLAY)
S1002 (B PLAY)
S1003 S1004 (A HALF)(A CrO2)
S1005 (REC A)
S1006 (B HALF)
S1007 (B METAL)
S1008 S1009 (B CrO2)(REC B)
1-650-669-
11
(See page 5)
TO MAIN BOARD CN104
B
S9020
S9030
S9010
S9050
S9040
R9020
R9160
R9150
R9010
R9210
R9220
R9030
15
(15)
1-652-284-
IC201
IC202
IC203
IC321
CN201
CN202
CN203
CN204
JW999
JW998
1-652-288-
11
(12)
L-CH
R-CH
HRPE 101 RECORD PLAYBACK ERASE HEAD
RV301
RV401
RV441
RV341
IC402
IC601
18


14
15
16
17
18
19
20
21
22
S9140
S9100
D9010
D9020
R9110
R9090
R9080
R9070
S9110
S9090
S9130
DECK A
1-652-283-
15
(15)
【MOTOR BOARD】
C651
M2
TRIGGER MOTOR
1-650-671-
B
(13)
HRPE101
RECORD
PLAYBACK
ERASE HEAD
L-CH
R-CH
HP101
PLAY BACK HEAD
M1
CAPSTAN MOTOR
【AUDIO BOARD】
CN601
CN651
RV301
RV441
RV341
RV401
RV451
RV452
RV311
RV411
IC602
IC601
IC611
Q651
Q623
Q622
Q621
R622
R621
T621
1-650-671-
13A
(13)

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D201	G-8	Q202	H-8
D202	H-7	Q203	G-8
D203	J-11	Q204	G-8
D204	I-11	Q205	G-9
D205	H-7	Q207	F-12
D301	I-11	Q227	J-7
D701	F-7	Q228	J-7
D9010	B-19	Q229	J-7
D9020	B-20	Q230	J-7
D9030	B-8	Q231	J-7
D9040	C-8	Q233	I-8
D9050	B-6	Q234	J-8
D9060	B-5	Q235	J-8
D9070	G-2	Q421	H-13
D9080	G-3	Q422	H-13
D9090	H-2	Q621	J-18
D9100	H-3	Q622	J-18
		Q623	I-17
IC201	H-7	Q624	G-8
IC202	G-7	Q625	G-8
IC203	F-8	Q651	G-21
IC321	H-11	Q701	F-6
IC601	I-15	Q702	F-6
IC602	H-16	Q1001	C-2
IC611	I-21	Q1002	C-6
Q201	I-8		

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ⁞ indicates side identified with part number.
- ● : Through hole.
- ○–●–○ : Jumper wire connected to the ground pattern on the component side.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

• Semiconductor Location

Ref. No.	Location
D102	D - 14
D103	C - 9
D104	B - 14
D107	D - 14
D181	D - 12
D300	C - 10
D501	I - 20
D801	B - 3
D802	C - 3
D803	D - 3
D804	E - 3
D805	F - 3
D806	B - 4
D807	C - 4
D808	D - 4
D809	E - 4
D810	F - 4
○ IC101	D - 17
△ IC101	B - 22
○ IC102	C - 14
△ IC102	B - 23
IC103	B - 15
IC104	D - 9
IC106	C - 12
IC107	C - 10
IC108	B - 10
IC501	F - 19
○ Q101	B - 13
△ Q101	C - 22
Q102	D - 14
Q103	D - 14
Q300	B - 11
Q301	B - 11
Q501	D - 19
Q801	G - 5
Q802	G - 5
Q803	B - 4
Q804	D - 4
Q805	E - 4
Q806	G - 4
Q807	G - 3

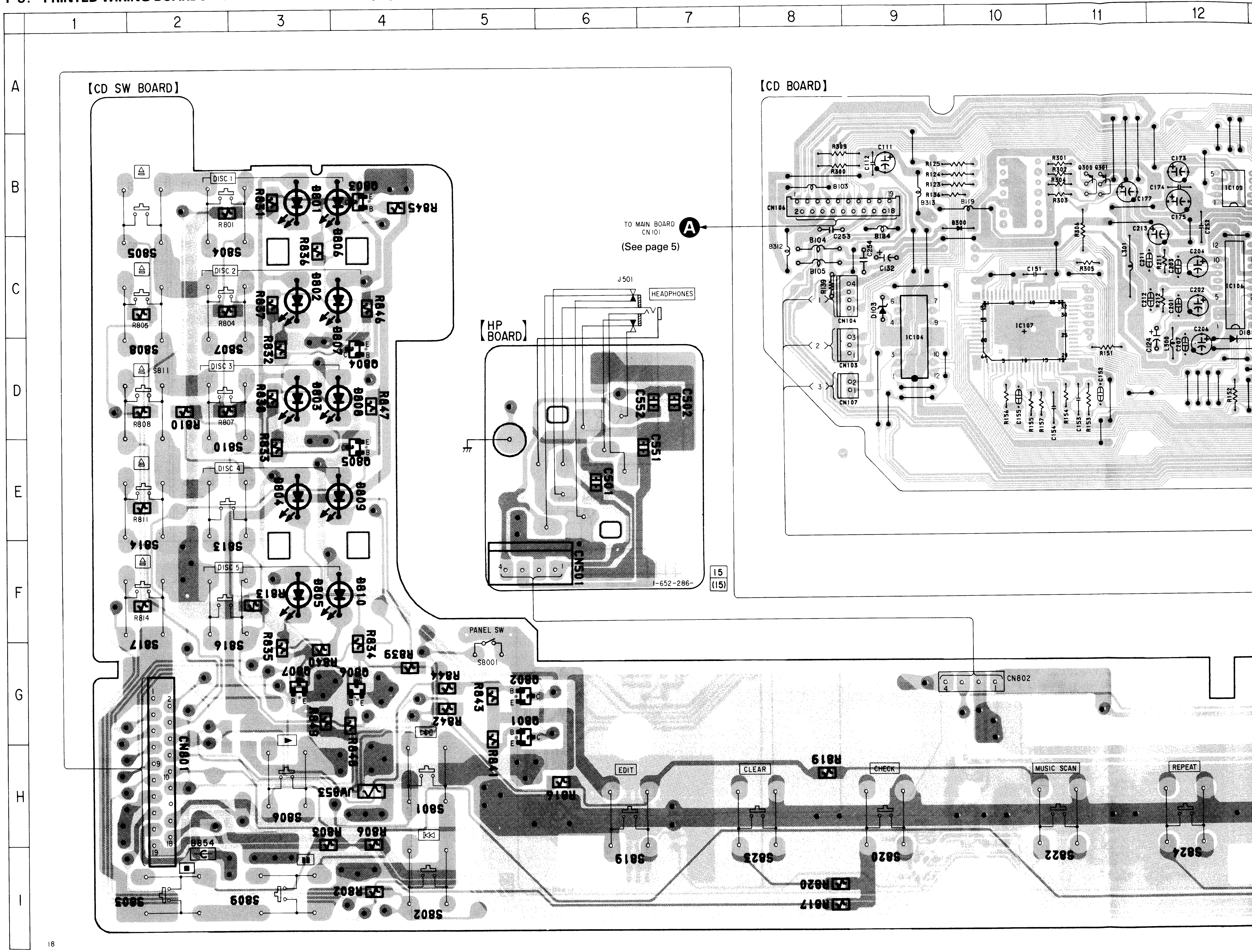
Note :
○ : CD BOARD
△ : BD BOARD

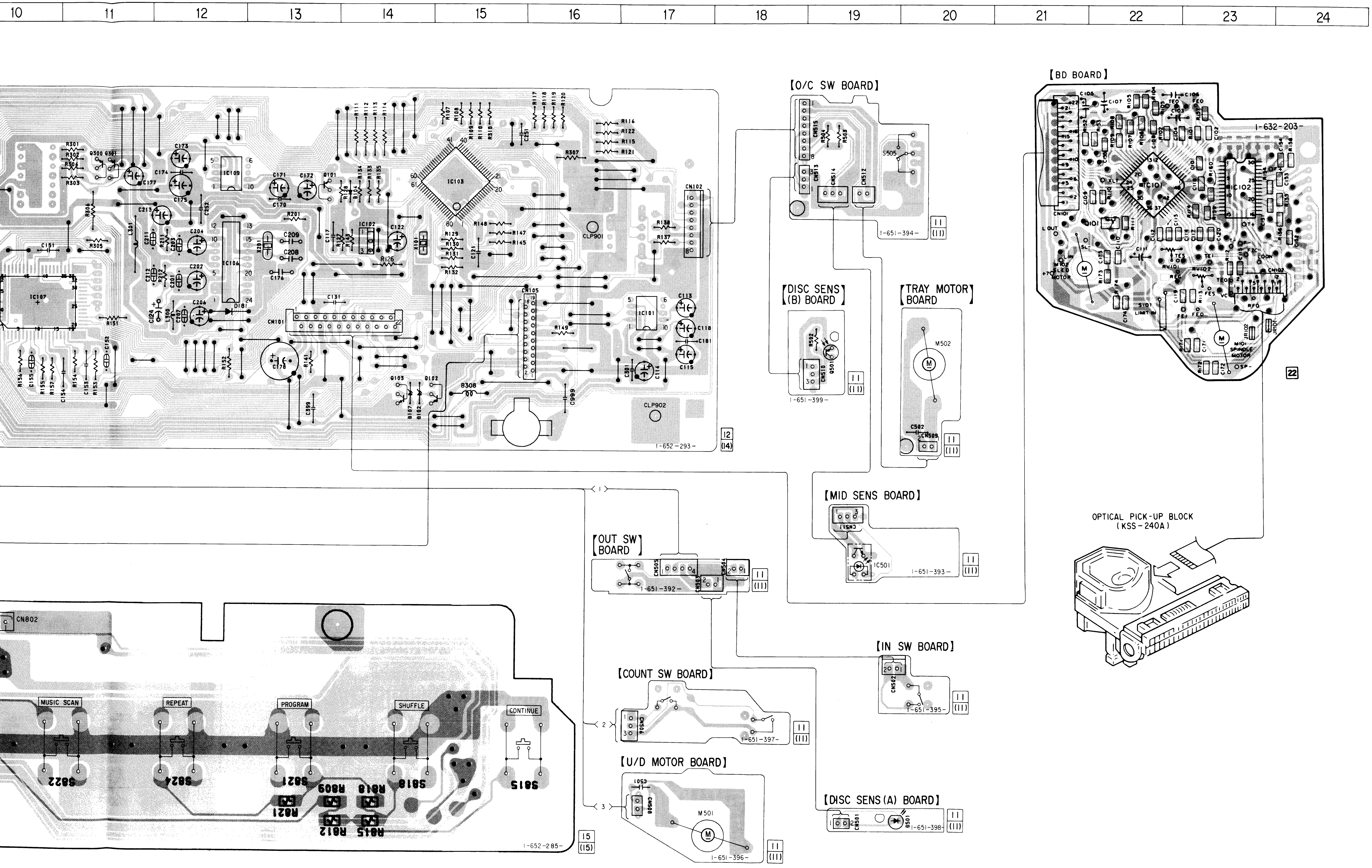
Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- : Pattern of the rear side.

1-5. PRINTED WIRING BOARDS—CD Section—

• See page 25–27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
【CD SW BOARD】
【CD BOARD】
【HP BOARD】
TO MAIN BOARD CN101
A
(See page 5)
J501
HEADPHONES
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
R801
R804
R805
R807
R808
R811
R814
S811
CN801
CN802
CN501
C501
C502
C551
C552
PANEL SW
S8001
EDIT
CLEAR
CHECK
MUSIC SCAN
REPEAT
1-652-286-
15
(15)
CN106
CN104
CN103
CN107
IC104
IC107
IC108
IC109
IC106
R309
R308
C111
C112
R125
R124
R123
R136
B313
B119
R301
R302
R304
R303
Q300
Q301
C173
C174
C177
C175
C213
C252
B103
B104
B105
B184
B312
B300
C253
C254
C132
R306
L301
C211
C204
C202
C201
C203
C212
C206
C124
L300
R305
C151
R151
R152
D103
R139
R156
C155
R155
R157
C154
R154
C153
R153
C152
18


10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
[O/C SW BOARD]
1-651-394-
[BD BOARD]
1-632-203-
IC101
IC102
CN101
CN102
M101 SPINDLE MOTOR
S101 LIMIT IN
[DISC SENS (B) BOARD]
1-651-399-
[TRAY MOTOR BOARD]
M502
[MID SENS BOARD]
1-651-393-
IC501
OPTICAL PICK-UP BLOCK (KSS-240A)
[OUT SW BOARD]
1-651-392-
[IN SW BOARD]
1-651-395-
[COUNT SW BOARD]
1-651-397-
[U/D MOTOR BOARD]
M501
1-651-396-
[DISC SENS (A) BOARD]
1-651-398-
IC103
IC106
IC107
IC109
IC102
IC101
CN101
CN102
CN105
CLP901
CLP902
1-652-293-
12
(14)
11
(11)
22
CN802
MUSIC SCAN
REPEAT
PROGRAM
SHUFFLE
CONTINUE
S822
S824
S821
S818
S815
R809
R818
R821
R812
R815
1-652-285-
15
(15)
1
2
3

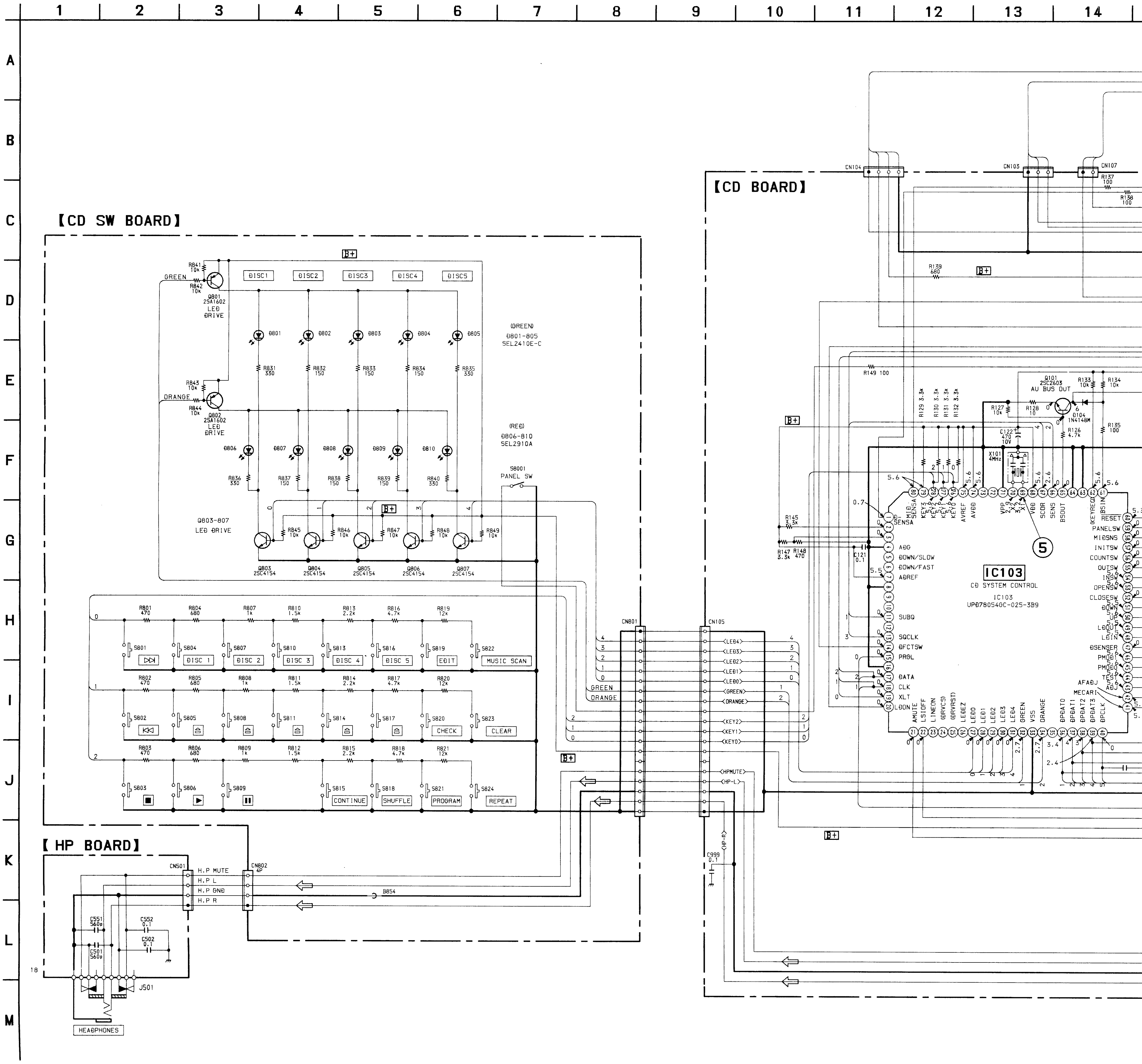
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés p une marque ⚠ sont critiqu pour la sécurité. Ne les remplacer que par u pièce portant le numéro spé fié.

- [B+] : B+ Line
- [B−] : B− Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to grounc under no-signal conditions.
  no mark : CD
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ➾ : CD

1-6. SCHEMATIC DIAGRAM—CD Section— •See page 30, 31 for IC Block Diagrams and Waveforms.


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J K L M
[CD SW BOARD]
[CD BOARD]
[HP BOARD]
B+
GREEN
ORANGE
Q801 2SA1602 LED DRIVE
Q802 2SA1602 LED DRIVE
DISC1
DISC2
DISC3
DISC4
DISC5
D801 D802 D803 D804 D805
(GREEN) D801-805 SEL2410E-C
(RED) D806-810 SEL2910A
D806 D807 D808 D809 D810
S8001 PANEL SW
Q803-807 LED DRIVE
Q803 2SC4154
Q804 2SC4154
Q805 2SC4154
Q806 2SC4154
Q807 2SC4154
S801 S802 S803 S804 S805 S806 S807 S808 S809 S810 S811 S813 S814 S815 S816 S817 S818 S819 S820 S821 S822 S823 S824
DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
EDIT
MUSIC SCAN
CHECK
CLEAR
CONTINUE
SHUFFLE
PROGRAM
REPEAT
CN801
CN105
CN104
CN103
CN107
CN501
CN802 4P
H.P MUTE
H.P L
H.P GND
H.P R
C551 560p
C501 560p
C552 0.1
C502 0.1
J501
HEADPHONES
B854
C999 0.1
(HP-R)
<HPMUTE>
<HP-L>
<LED4> <LED3> <LED2> <LED1> <LED0>
<GREEN> <ORANGE>
<KEY2> <KEY1> <KEY0>
IC103
CD SYSTEM CONTROL
IC103 UPD78054OGC-025-3B9
Q101 2SC2603 AU BUS OUT
D104 1N4148M
X101 4MHz
R139 680
R149 100
R145 3.3k
R147 3.3k
R148 470
C121 0.1
C122 470 10V
SENSA
ADG
DOWN/SLOW
DOWN/FAST
ADREF
SUBQ
SQCLK
DFCTSW
PRGL
DATA
CLK
XLT
LDON
RESET
PANELSW
MIDSNS
INITSW
COUNTSW
OUTSW
OPENSW
CLOSESW
DSENSER
AFADJ
MECAR1
5

ents identi-
⚠ or dot-
h mark ⚠
or safety.
y with part
ified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

ne

ne

tment for repair.

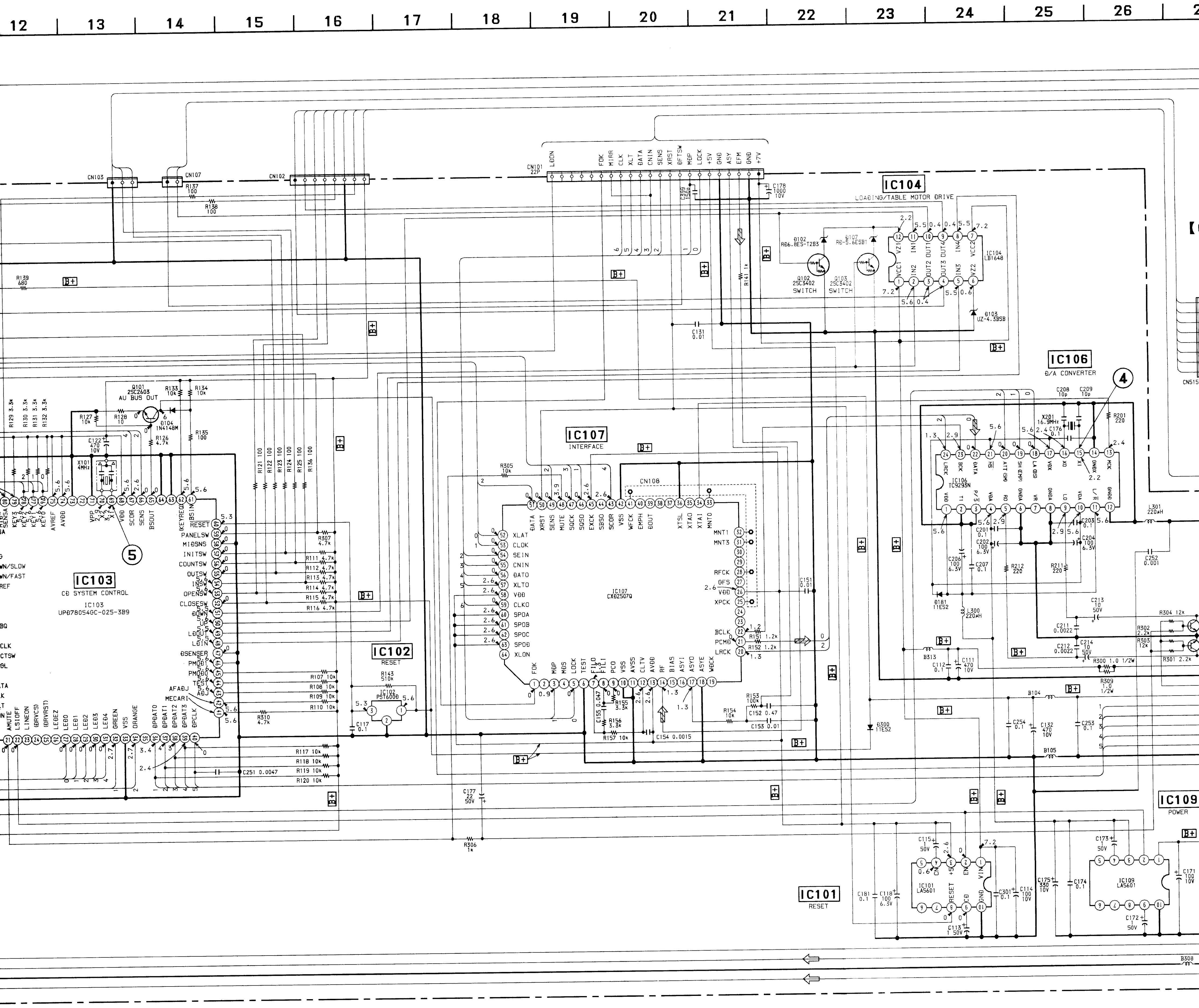
waveforms are dc with respect to ground
al conditions.

aken with a VOM (Input Impedance 10MΩ).
tions may be noted due to normal produc-
s.

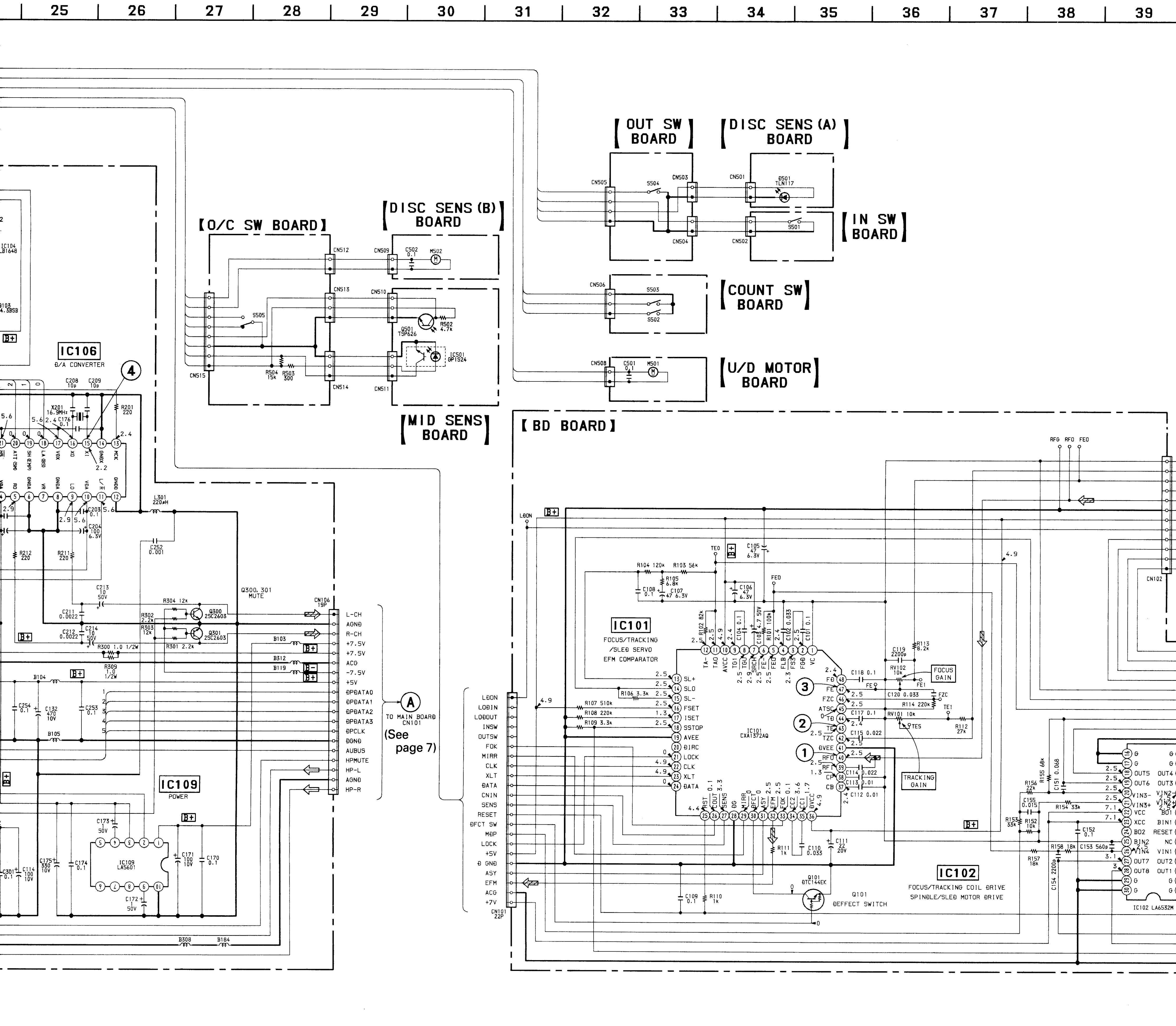
e taken with a oscilloscope.
tions may be noted due to normal produc-
es.

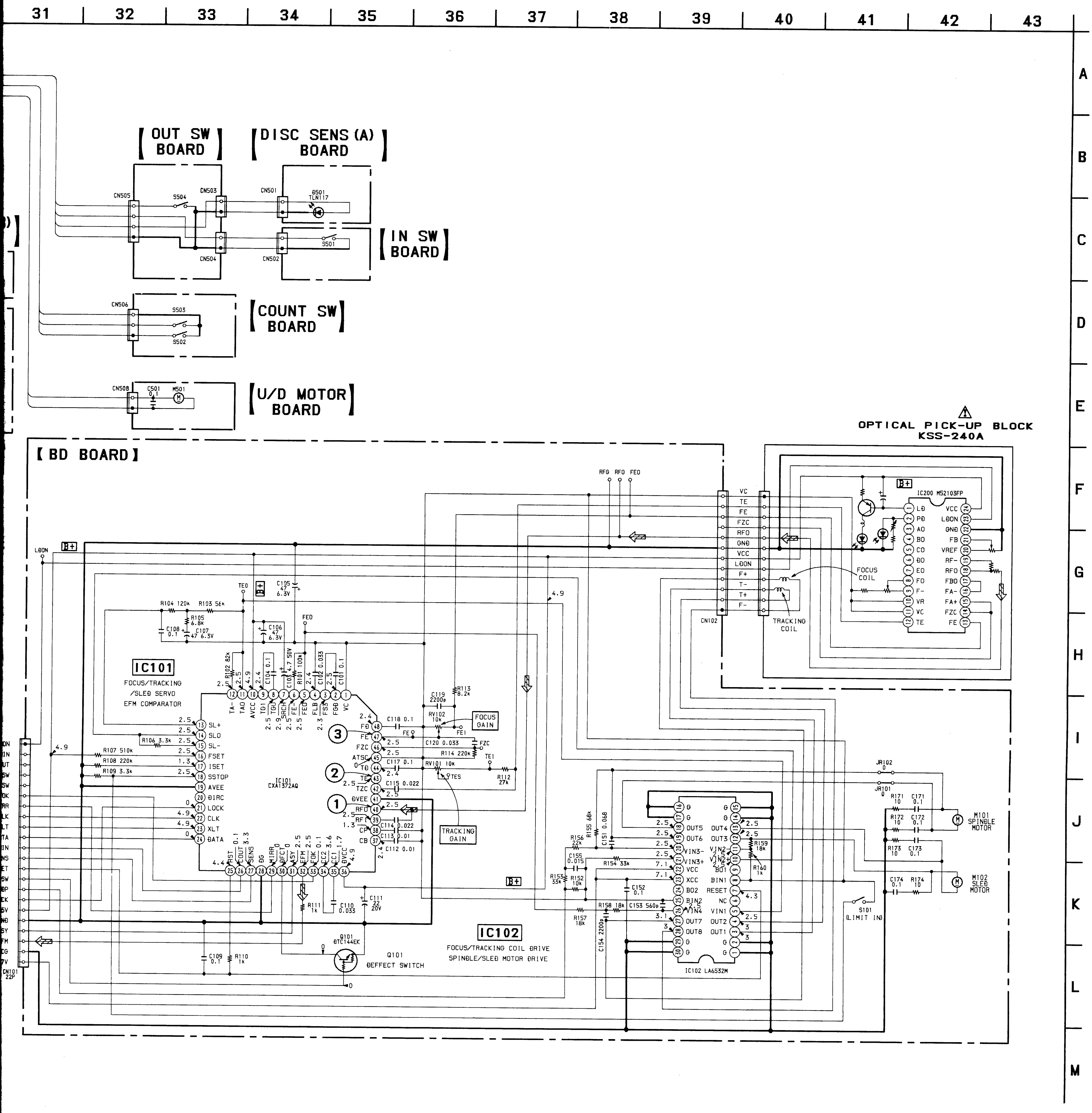
ers refer to waveforms.

: CD



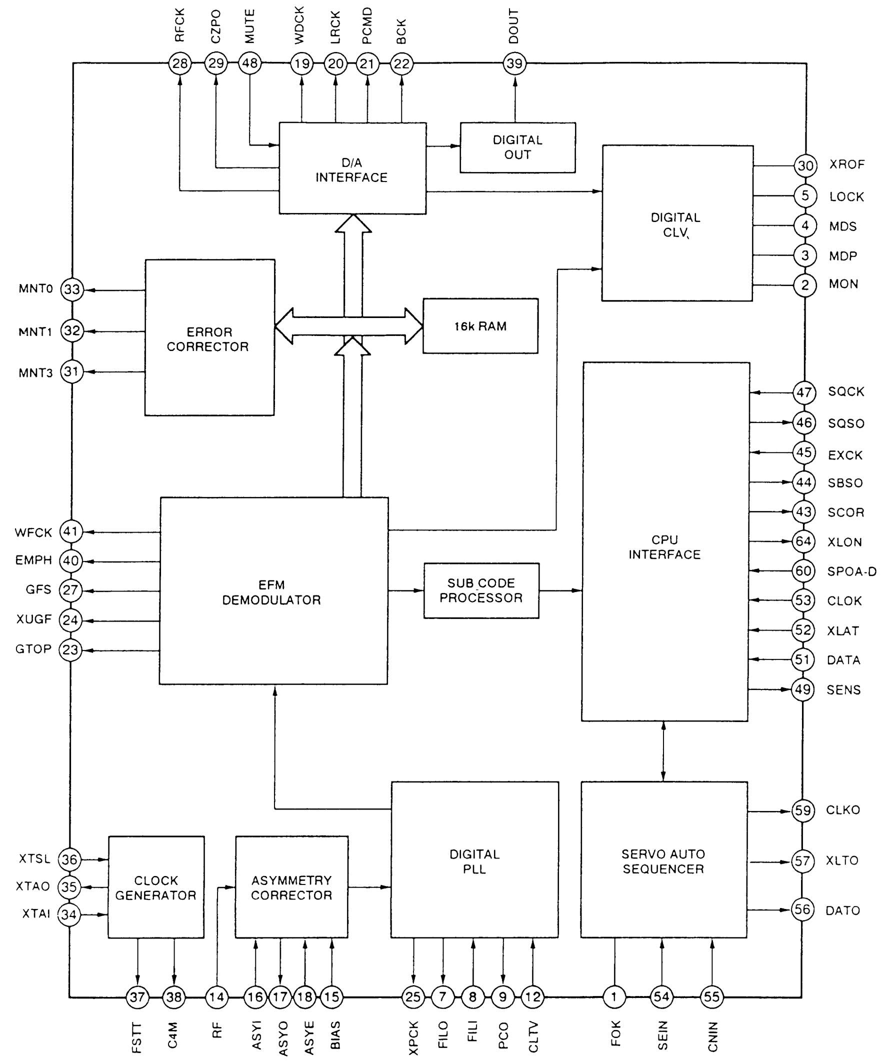
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
CN103
CN107
CN102
CN101 22P
IC104
LOADING/TABLE MOTOR DRIVE
IC104 LB1648
Q102 2SC3402 SWITCH
Q103 2SC3402 SWITCH
IC106
D/A CONVERTER
X201 16.9MHz
IC107
INTERFACE
IC107 CX625070
CN108
IC103
CD SYSTEM CONTROL
IC103 UPD78054OC-025-3B9
Q101 2SC2603 AU BUS OUT
X101 4MHz
IC102
RESET
IC101
RESET
IC101 LA5601
IC109
POWER
IC109 LA5601
④
⑤
B+


25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
OUT SW BOARD
DISC SENS (A) BOARD
IN SW BOARD
DISC SENS (B) BOARD
O/C SW BOARD
COUNT SW BOARD
U/D MOTOR BOARD
MID SENS BOARD
BD BOARD
IC106
D/A CONVERTER
IC109
POWER
IC101
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
IC101 CXA1372AQ
IC102
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
IC102 LA6532M
Q101 DTC144EK
Q101 DEFFECT SWITCH
Q300, 301 MUTE
FOCUS GAIN
TRACKING GAIN
TO MAIN BOARD CN101
(See page 7)
CN106 19P
L-CH
AGND
R-CH
+7.5V
+7.5V
ACG
-7.5V
+5V
DPDATA0
DPDATA1
DPDATA2
DPDATA3
DPCLK
DGND
AUBUS
HPMUTE
HP-L
AGND
HP-R
CN101 22P
LDON
LODIN
LODOUT
INSW
OUTSW
FOK
MIRR
CLK
XLT
DATA
CNIN
SENS
RESET
DFCT SW
MDP
LOCK
+5V
D GND
ASY
EFM
ACG
+7V

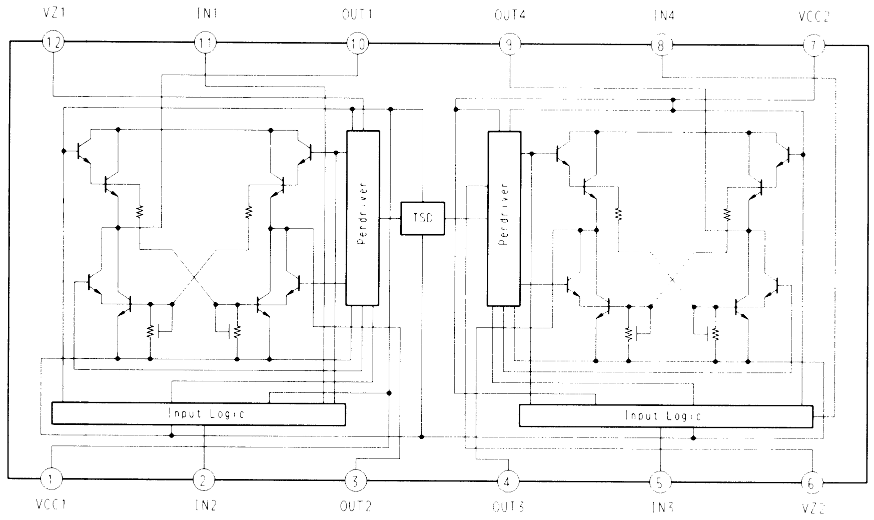

OUT SW BOARD
DISC SENS (A) BOARD
IN SW BOARD
COUNT SW BOARD
U/D MOTOR BOARD
BD BOARD
OPTICAL PICK-UP BLOCK KSS-240A
CN505
CN503
CN504
CN501
CN502
CN506
CN508
S504
S503
S502
S501
D501 TLN117
C501 0.1
M501
IC101
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
IC101 CXA1372AQ
IC102
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
IC102 LA6532M
IC200 M52103FP
CN101 22P
CN102
FOCUS GAIN
TRACKING GAIN
FOCUS COIL
TRACKING COIL
Q101 DTC144EK
Q101 DEFFECT SWITCH
S101 (LIMIT IN)
M101 SPINDLE MOTOR
M102 SLED MOTOR
RV101 10k
RV102 10k
JR101
JR102
VC
TE
FE
FZC
RFO
GND
VCC
LDON
F+
T-
T+
F-
RFG RFO FED
B+
31
32
33
34
35
36
37
38
39
40
41
42
43
A
B
C
D
E
F
G
H
I
J
K
L
M

- **IC Block Diagrams**

IC107 CXD2507Q

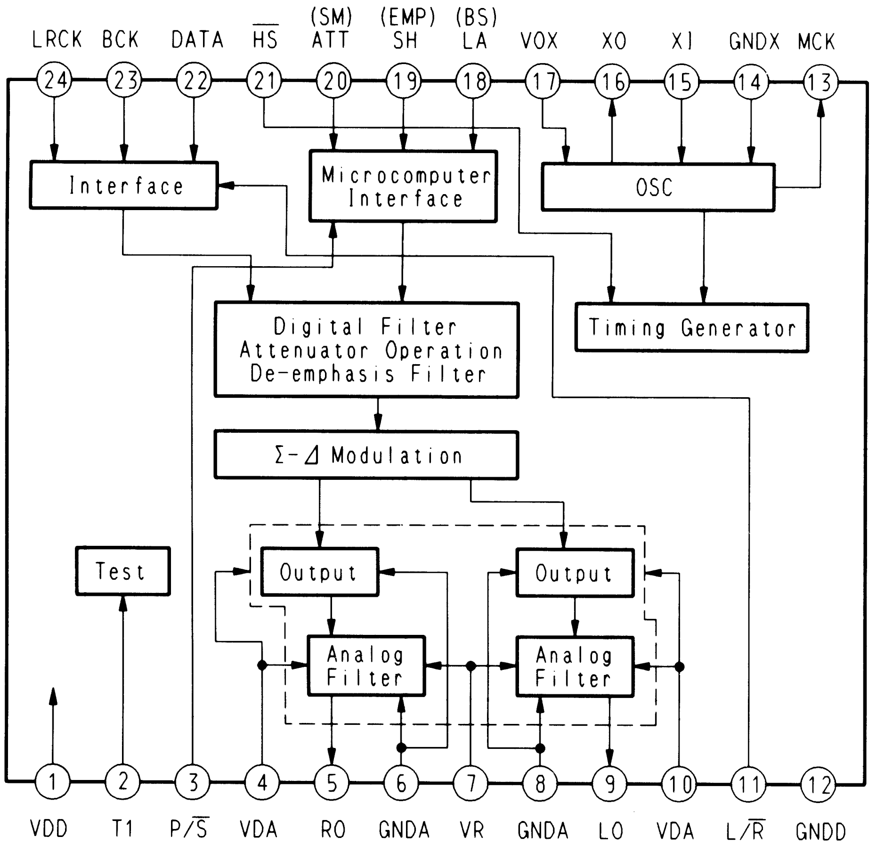

RFCK 28
CZPO 29
MUTE 48
WDCK 19
LRCK 20
PCMD 21
BCK 22
DOUT 39
D/A INTERFACE
DIGITAL OUT
DIGITAL CLV
30 XROF
5 LOCK
4 MDS
3 MDP
2 MON
MNT0 33
MNT1 32
MNT3 31
ERROR CORRECTOR
16k RAM
CPU INTERFACE
47 SQCK
46 SQSO
45 EXCK
44 SBSO
43 SCOR
64 XLON
60 SPOA-D
53 CLOK
52 XLAT
51 DATA
49 SENS
WFCK 41
EMPH 40
GFS 27
XUGF 24
GTOP 23
EFM DEMODULATOR
SUB CODE PROCESSOR
59 CLKO
57 XLTO
56 DATO
XTSL 36
XTAO 35
XTAI 34
CLOCK GENERATOR
ASYMMETRY CORRECTOR
DIGITAL PLL
SERVO AUTO SEQUENCER
37 FSTT
38 C4M
14 RF
16 ASYI
17 ASYO
18 ASYE
15 BIAS
25 XPCK
7 FILO
8 FILI
9 PCO
12 CLTV
1 FOK
54 SEIN
55 CNIN

IC104 LB1648

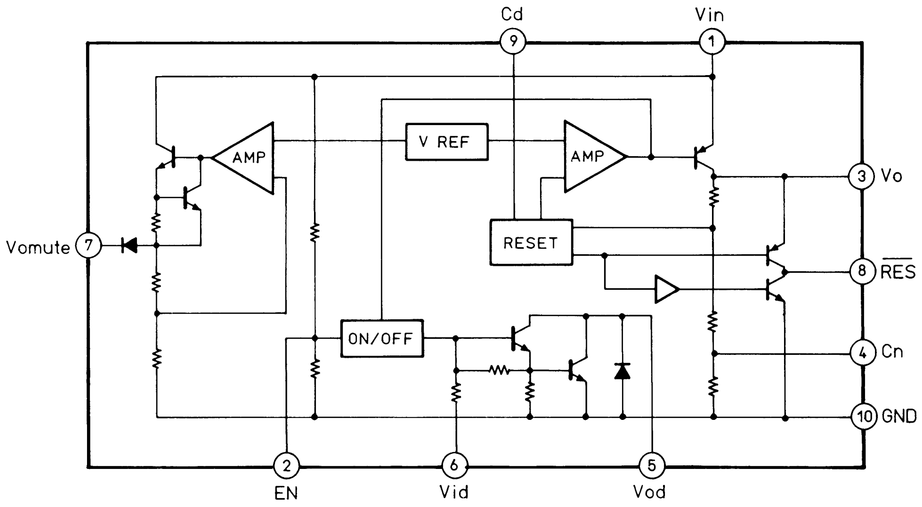

VZ1 12
IN1 11
OUT1 10
OUT4 9
IN4 8
VCC2 7
Predriver
TSD
Predriver
Input Logic
Input Logic
1 VCC1
2 IN2
3 OUT2
4 OUT3
5 IN3
6 VZ2

MODE	IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
OPEN	0	0	OPEN	OPEN	0	0	OPEN	OPEN
FORWARD	1	0	H	L	1	0	H	L
REVERSE	0	1	L	H	0	1	L	H
BRAKE	1	1	L	L	1	1	L	L

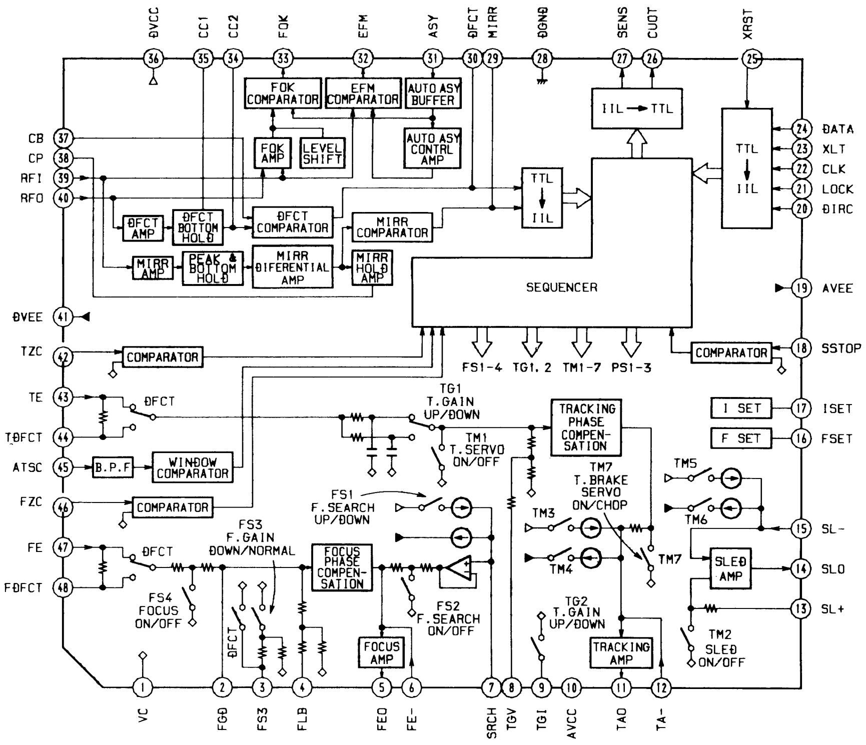
IC106 TC9293N


LRCK 24
BCK 23
DATA 22
HS 21
(SM) ATT 20
(EMP) SH 19
(BS) LA 18
VOX 17
XO 16
XI 15
GNDX 14
MCK 13
Interface
Microcomputer Interface
OSC
Timing Generator
Digital Filter Attenuator Operation De-emphasis Filter
Σ-Δ Modulation
Test
Output
Output
Analog Filter
Analog Filter
1 VDD
2 T1
3 P/S
4 VDA
5 RO
6 GNDA
7 VR
8 GNDA
9 LO
10 VDA
11 L/R
12 GNDD

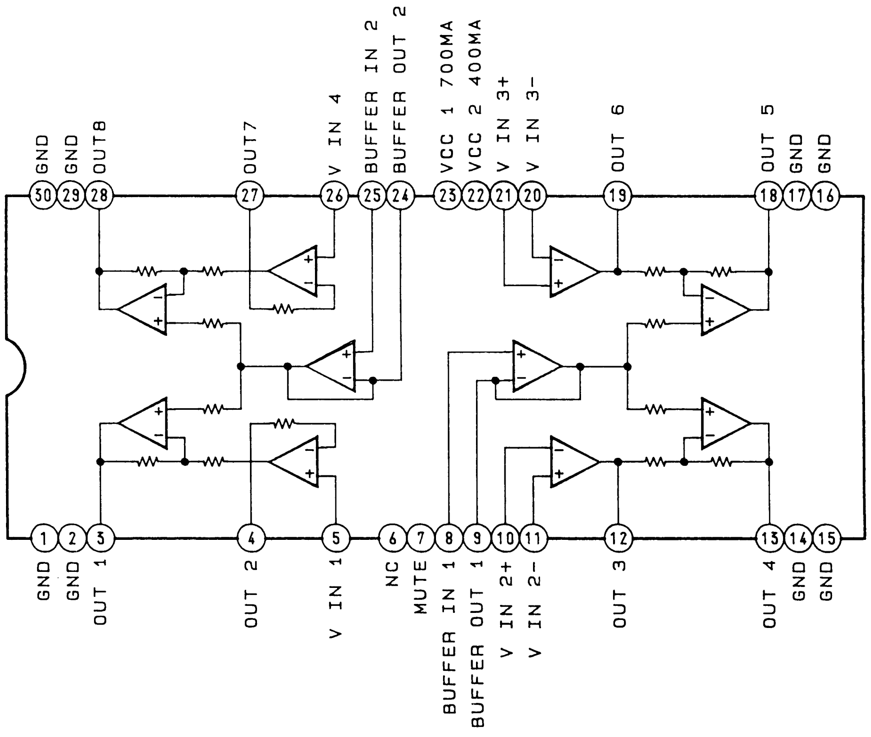
IC101, 109 LA5601


Cd 9
Vin 1
AMP
V REF
AMP
3 Vo
Vomute 7
RESET
8 RES
ON/OFF
4 Cn
10 GND
2 EN
6 Vid
5 Vod

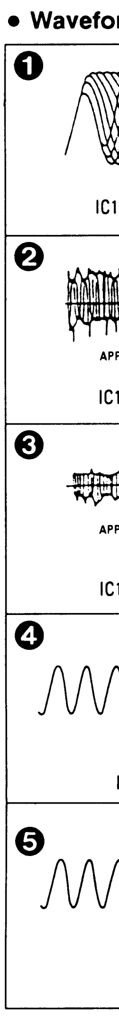
IC101 CXA1372AQ

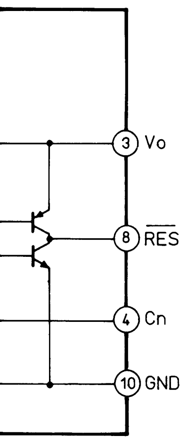

36 ØVCC
35 CC1
34 CC2
33 FOK
32 EFM
31 ASY
30 ØFCT
29 MIRR
28 ØGND
27 SENS
26 CUOT
25 XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
IIL → TTL
TTL ↓ IIL
24 DATA
23 XLT
22 CLK
21 LOCK
20 ØIRC
CB 37
CP 38
RFI 39
RFO 40
ØFCT AMP
ØFCT BOTTOM HOLD
ØFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
19 AVEE
ØVEE 41
TZC 42
COMPARATOR
COMPARATOR
18 SSTOP
FS1-4 TG1, 2 TM1-7 PS1-3
TE 43
TØFCT 44
ATSC 45
FZC 46
FE 47
FØFCT 48
ØFCT
B.P.F
WINDOW COMPARATOR
COMPARATOR
TG1 T.GAIN UP/DOWN
TM1 T.SERVO ON/OFF
TRACKING PHASE COMPENSATION
I SET
F SET
17 ISET
16 FSET
TM7 T.BRAKE SERVO ON/CHOP
TM5
TM6
TM3
TM4
TM7
FS1 F.SEARCH UP/DOWN
FS3 F.GAIN DOWN/NORMAL
FOCUS PHASE COMPENSATION
FS2 F.SEARCH ON/OFF
FS4 FOCUS ON/OFF
FOCUS AMP
TG2 T.GAIN UP/DOWN
TRACKING AMP
SLED AMP
TM2 SLED ON/OFF
15 SL-
14 SLO
13 SL+
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE-
7 SRCH
8 TGV
9 TG1
10 AVCC
11 TAO
12 TA-

IC102 LA6532M

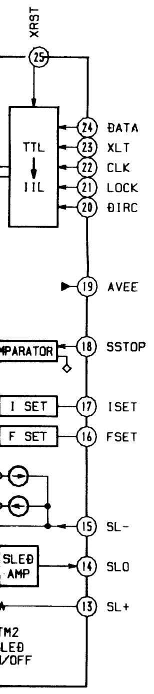

30 GND
29 GND
28 OUT8
27 OUT7
26 V IN 4
25 BUFFER IN 2
24 BUFFER OUT 2
23 VCC 1 700MA
22 VCC 2 400MA
21 V IN 3+
20 V IN 3-
19 OUT 6
18 OUT 5
17 GND
16 GND
1 GND
2 GND
3 OUT 1
4 OUT 2
5 V IN 1
6 NC
7 MUTE
8 BUFFER IN 1
9 BUFFER OUT 1
10 V IN 2+
11 V IN 2-
12 OUT 3
13 OUT 4
14 GND
15 GND

- **Wavefor**

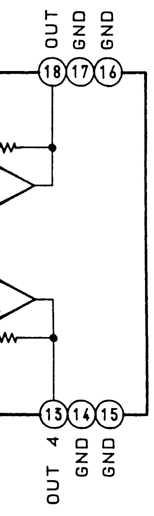




③ Vo
⑧ RES
④ Cn
⑩ GND

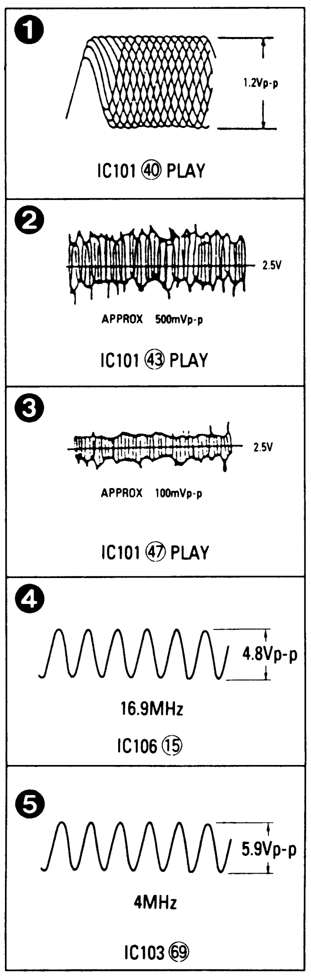


XRST
㉕
TTL
IIL
㉔ DATA
㉓ XLT
㉒ CLK
㉑ LOCK
⑳ DIRC
⑲ AVEE
MPARATOR
⑱ SSTOP
I SET
⑰ ISET
F SET
⑯ FSET
⑮ SL-
SLED AMP
⑭ SLO
⑬ SL+
TM2
LED
/OFF



OUT 5
GND
GND
⑱⑰⑯
⑬⑭⑮
OUT 4
GND
GND

- **Waveform**



IC101 ㊵ PLAY

IC101 ㊸ PLAY

IC101 ㊼ PLAY

16.9MHz

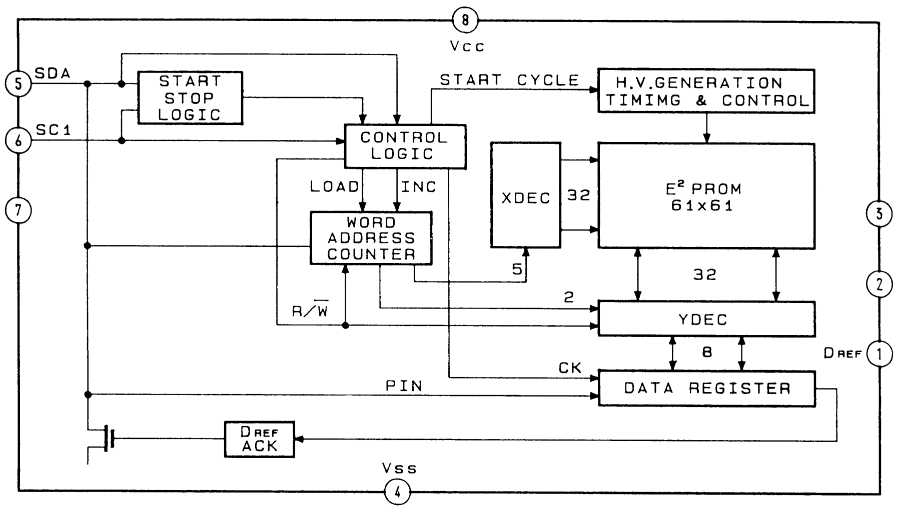
IC106 ⑮

4MHz

IC103 (69)

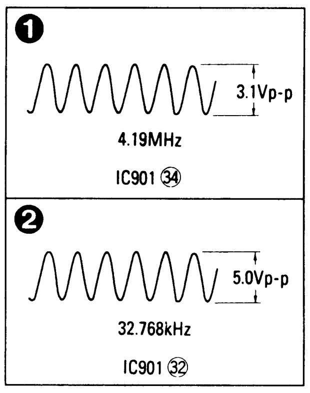
• IC Block Diagram

IC902 X24C01S



⑧
Vcc
⑤ SDA
⑥ SC1
⑦
START STOP LOGIC
START CYCLE
H.V.GENERATION TIMIMG & CONTROL
CONTROL LOGIC
LOAD
INC
WORD ADDRESS COUNTER
XDEC
32
E² PROM 61x61
5
32
2
R/W
YDEC
8
CK
PIN
DATA REGISTER
DREF ACK
③
②
DREF ①
Vss
④

- **Waveform**



4.19MHz

IC901 ㉞

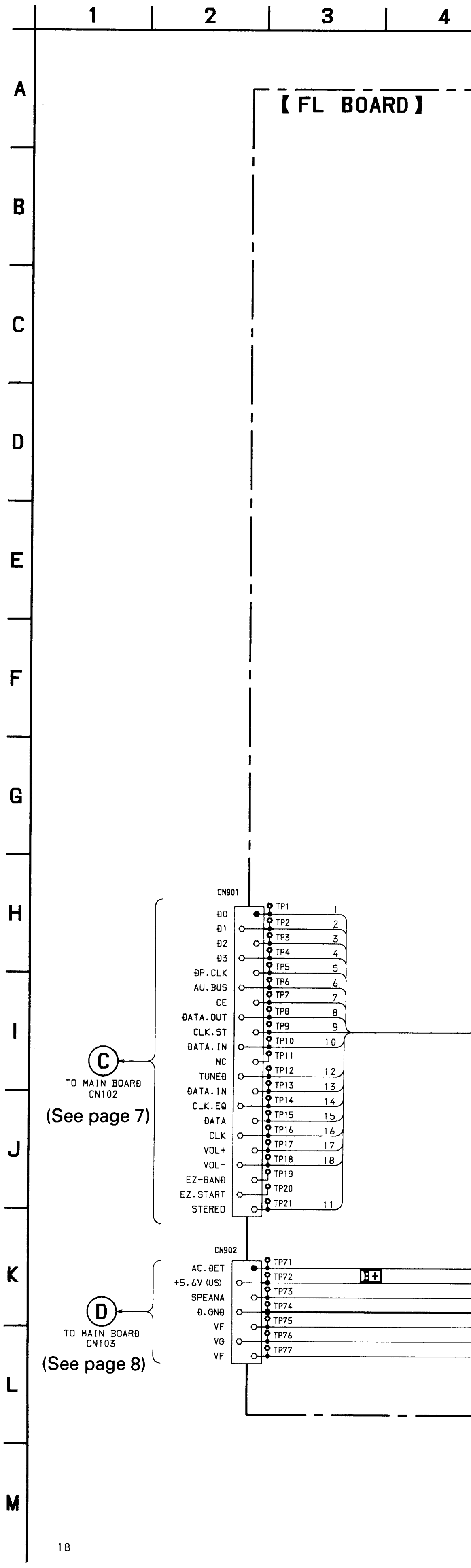
32.768kHz

IC901 ㉜

Note on Schematic Diagram:

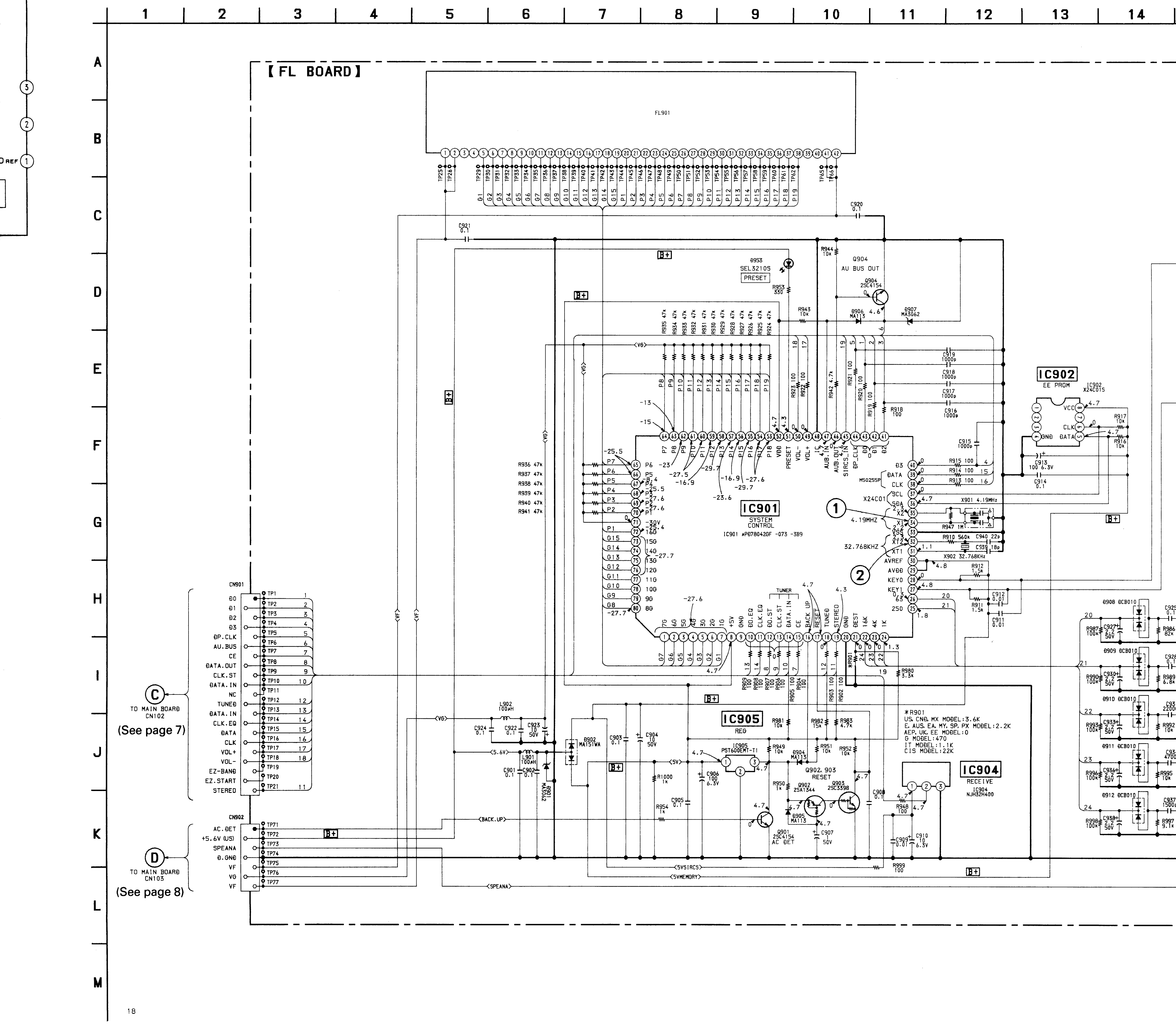
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- B+ : B+ Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

1-7. SCHEMATIC DIAGRAM—PANEL Secti

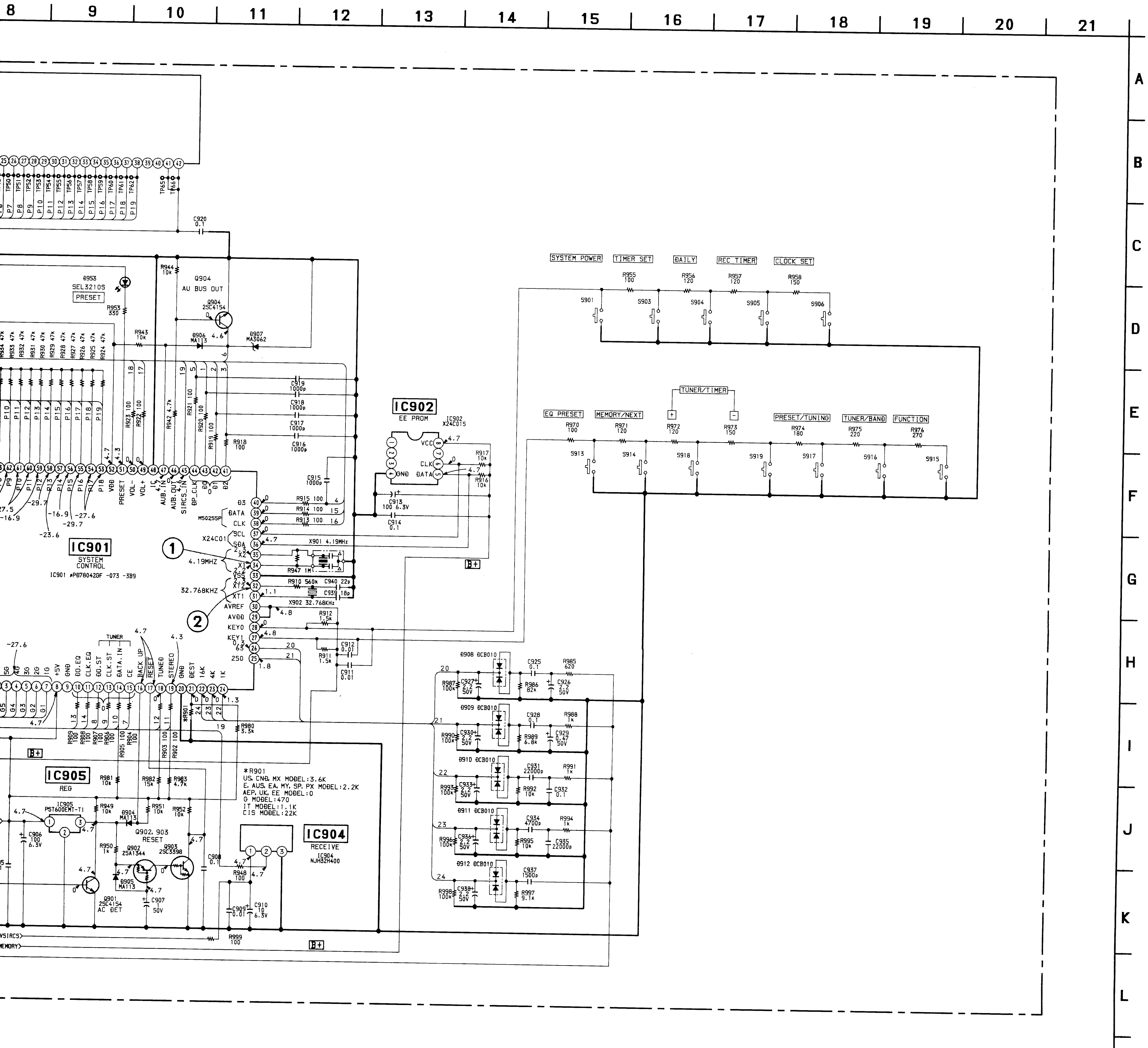


1
2
3
4
A
B
C
D
E
F
G
H
I
J
K
L
M
[FL BOARD]
CN901
D0
D1
D2
D3
DP.CLK
AU.BUS
CE
DATA.OUT
CLK.ST
DATA.IN
NC
TUNED
DATA.IN
CLK.EQ
DATA
CLK
VOL+
VOL-
EZ-BAND
EZ.START
STEREO
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
Ⓒ
TO MAIN BOARD CN102
(See page 7)
CN902
AC.DET
+5.6V (US)
SPEANA
D.GND
VF
VG
VF
TP71
TP72
TP73
TP74
TP75
TP76
TP77
B+
Ⓓ
TO MAIN BOARD CN103
(See page 8)
18

1-7. SCHEMATIC DIAGRAM—PANEL Section—

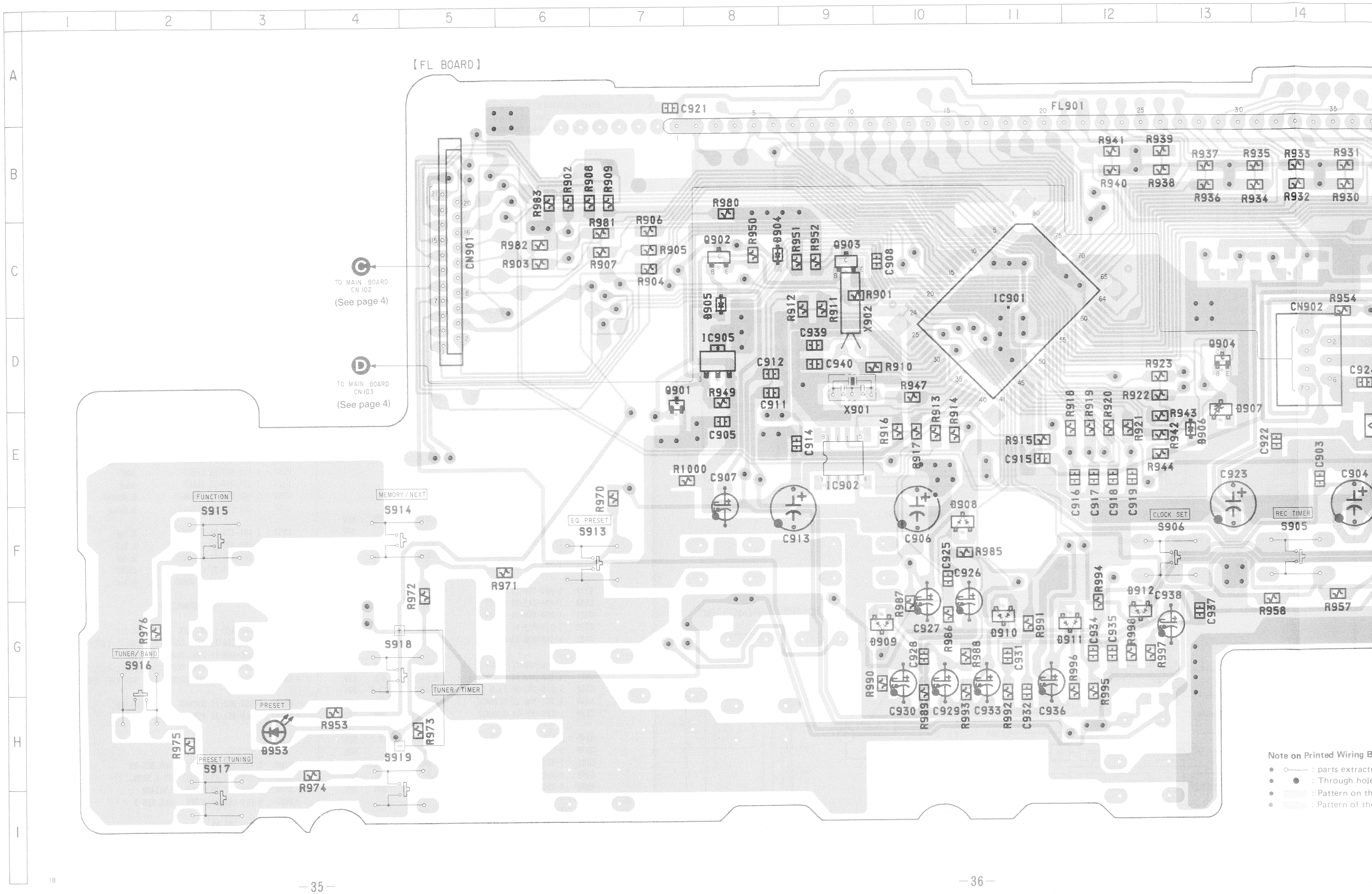


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J K L M
【FL BOARD】
FL901
IC901
SYSTEM CONTROL
IC901 μPD78042GF-073-3B9
IC902
EE PROM
IC902 X24C01S
IC904
RECEIVE
IC904 NJH32H400
IC905
REG
IC905 PST600EMT-T1
Q904
AU BUS OUT
Q904 2SC4154
D953 SEL3210S
PRESET
Q902, 903
RESET
Q902 2SA1344
Q903 2SC3398
Q901 2SC4154
AC DET
D905 MA113
D906 MA113
D907 MA3062
D901 MA3062
D902 MA151WA
X901 4.19MHz
X902 32.768KHz
4.19MHZ
32.768KHZ
L901 100μH
L902 100μH
CN901
CN902
TO MAIN BOARD CN102
(See page 7)
TO MAIN BOARD CN103
(See page 8)
C
D
1
2
3
REF
*R901
US, CND, MX MODEL:3.6K
E, AUS, EA, MY, SP, PX MODEL:2.2K
AEP, UK, EE MODEL:0
G MODEL:470
IT MODEL:1.1K
CIS MODEL:22K
DD
D1
D2
D3
DP.CLK
AU.BUS
CE
DATA.OUT
CLK.ST
DATA.IN
NC
TUNED
DATA.IN
CLK.EQ
DATA
CLK
VOL+
VOL-
EZ-BAND
EZ.START
STEREO
AC.DET
+5.6V (US)
SPEANA
D.GND
VF
VG
VF
<VG>
<VF>
<5.6V>
<5V>
<BACK.UP>
<5VSIRCS>
<5VMEMORY>
<SPEANA>
B+
VDD
PRESET
VOL-
VOL+
AUB.IN
AUB.OUT
SIRCS_IN
DP_CLK
MS0255P
X24C01
DATA
CLK
SCL
SDA
X2
X1
VSS
XT2
XT1
AVREF
AVDD
KEY0
KEY1
25D
TUNER
BACK UP
RESET
TUNED
STEREO
GND
DEST
16K
4K
1K
D908 DCB010
D909 DCB010
D910 DCB010
D911 DCB010
D912 DCB010
18


IC901
SYSTEM CONTROL
IC901 μPD78042GF -073 -3B9
IC902
EE PROM
IC902 X24C01S
IC904
RECEIVE
IC904 NJH32H400
IC905
REG
IC905 PST600EMT-T1
Q904
AU BUS OUT
Q904 2SC4154
D953 SEL3210S
PRESET
D906 MA113
D907 MA3062
Q902, 903
RESET
Q902 2SA1344
Q903 2SC3398
Q901 2SC4154
AC DET
D904 MA113
D905 MA113
X901 4.19MHz
X902 32.768KHz
4.19MHZ
32.768KHZ
M50255P
X24C01
SYSTEM POWER
TIMER SET
DAILY
REC TIMER
CLOCK SET
EQ PRESET
MEMORY/NEXT
TUNER/TIMER
+
−
PRESET/TUNING
TUNER/BAND
FUNCTION
S901
S903
S904
S905
S906
S913
S914
S918
S919
S917
S916
S915
D908 DCB010
D909 DCB010
D910 DCB010
D911 DCB010
D912 DCB010
*R901
US, CND, MX MODEL:3.6K
E, AUS, EA, MY, SP, PX MODEL:2.2K
AEP, UK, EE MODEL:0
G MODEL:470
IT MODEL:1.1K
CIS MODEL:22K
TUNER
B+
①
②
8
9
10
11
12
13
14
15
16
17
18
19
20
21
A
B
C
D
E
F
G
H
I
J
K
L
M

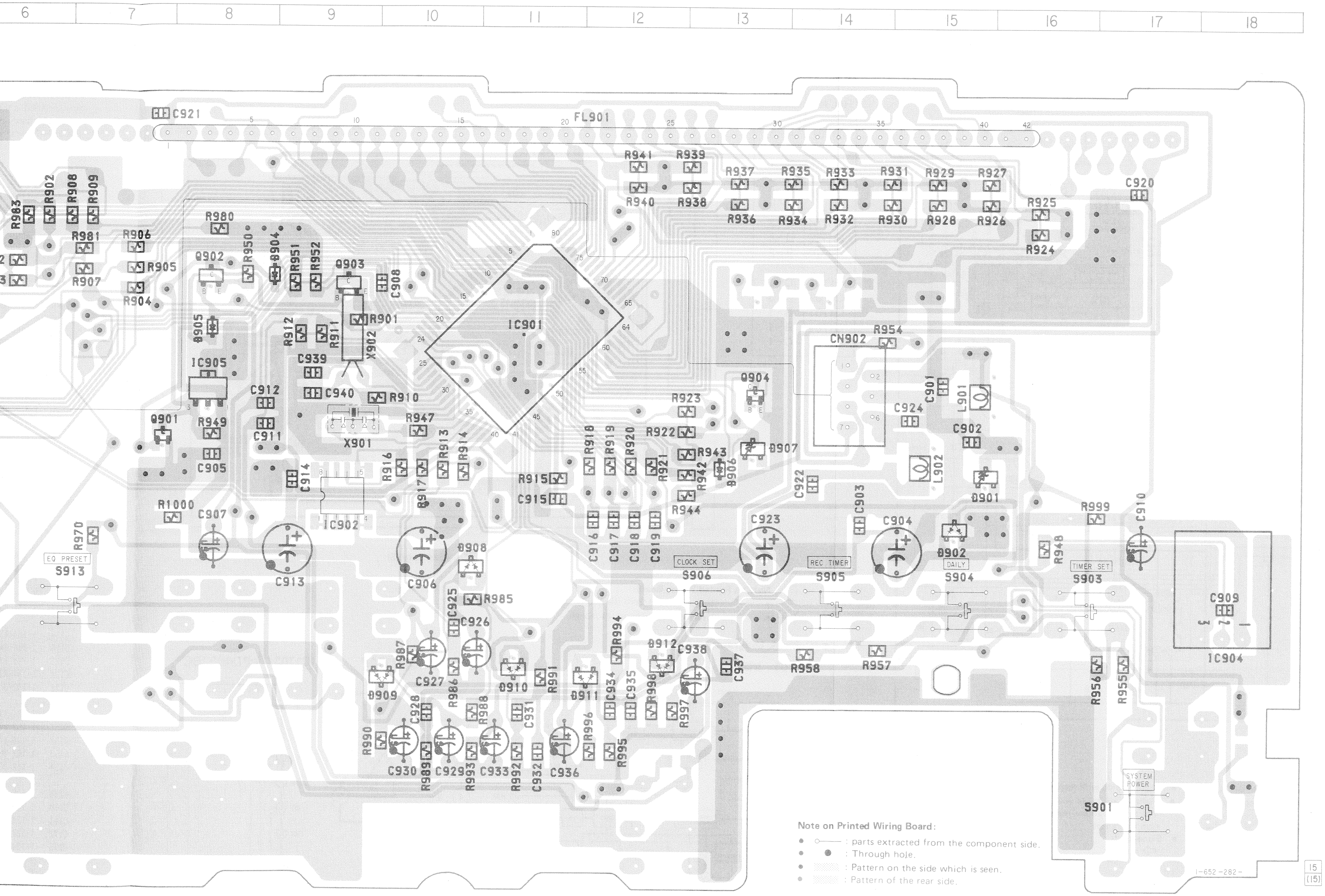
1-8. PRINTED WIRING BOARD—PANEL Section—

- See page 25–27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.



1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
【FL BOARD】
FL901
C921
CN901
TO MAIN BOARD CN102
(See page 4)
TO MAIN BOARD CN103
(See page 4)
IC901
IC902
IC905
CN902
X901
X902
Q901
Q902
Q903
Q904
Q907
Q908
Q909
Q910
Q911
Q912
Q953
R901
R902
R903
R904
R905
R906
R907
R908
R909
R910
R911
R912
R913
R914
R915
R916
R917
R918
R919
R920
R921
R922
R923
R930
R931
R932
R933
R934
R935
R936
R937
R938
R939
R940
R941
R942
R943
R944
R947
R949
R950
R951
R952
R953
R954
R957
R958
R970
R971
R972
R973
R974
R975
R976
R980
R981
R982
R983
R985
R986
R987
R988
R989
R990
R991
R992
R993
R994
R995
R996
R997
R998
R1000
C903
C904
C905
C906
C907
C908
C911
C912
C913
C914
C915
C916
C917
C918
C919
C922
C923
C925
C926
C927
C928
C929
C930
C931
C932
C933
C934
C935
C936
C937
C938
C939
C940
D904
D905
D906
FUNCTION
S915
MEMORY/NEXT
S914
EQ PRESET
S913
CLOCK SET
S906
REC TIMER
S905
TUNER/BAND
S916
S918
TUNER/TIMER
PRESET
PRESET/TUNING
S917
S919

Note on Printed Wiring B
- ○—— : parts extract
- ● : Through hole
- ▨ : Pattern on th
- ▨ : Pattern of th


6
7
8
9
10
11
12
13
14
15
16
17
18
C921
FL901
R941
R939
R940
R938
R937
R935
R933
R931
R929
R927
R936
R934
R932
R930
R928
R926
R925
R924
C920
R983
R902
R908
R909
R981
R907
R906
R905
R904
R980
Q902
R950
D904
R951
R952
Q903
C908
R901
X902
D905
R912
R911
IC905
C939
C940
R910
IC901
CN902
R954
Q904
C901
L901
C924
C912
C911
Q901
R949
C905
X901
R947
R913
R914
R923
R922
R943
D907
C902
R918
R919
R920
R921
R942
D906
C922
L902
R916
R917
C914
IC902
R915
C915
R944
D901
R1000
C907
R970
EQ PRESET
S913
C913
C906
D908
C916
C917
C918
C919
CLOCK SET
S906
C923
C903
REC TIMER
S905
C904
D902
DAILY
S904
R999
C910
R948
TIMER SET
S903
C909
IC904
R985
C925
C926
R994
D912
C938
C937
R958
R957
R987
C927
R986
D910
R991
D911
C934
C935
R998
R997
R956
R955
D909
C928
R988
C931
R996
R990
R995
C930
R989
C929
R993
C933
R992
C932
C936
SYSTEM POWER
S901
1-652-282-
15
(15)

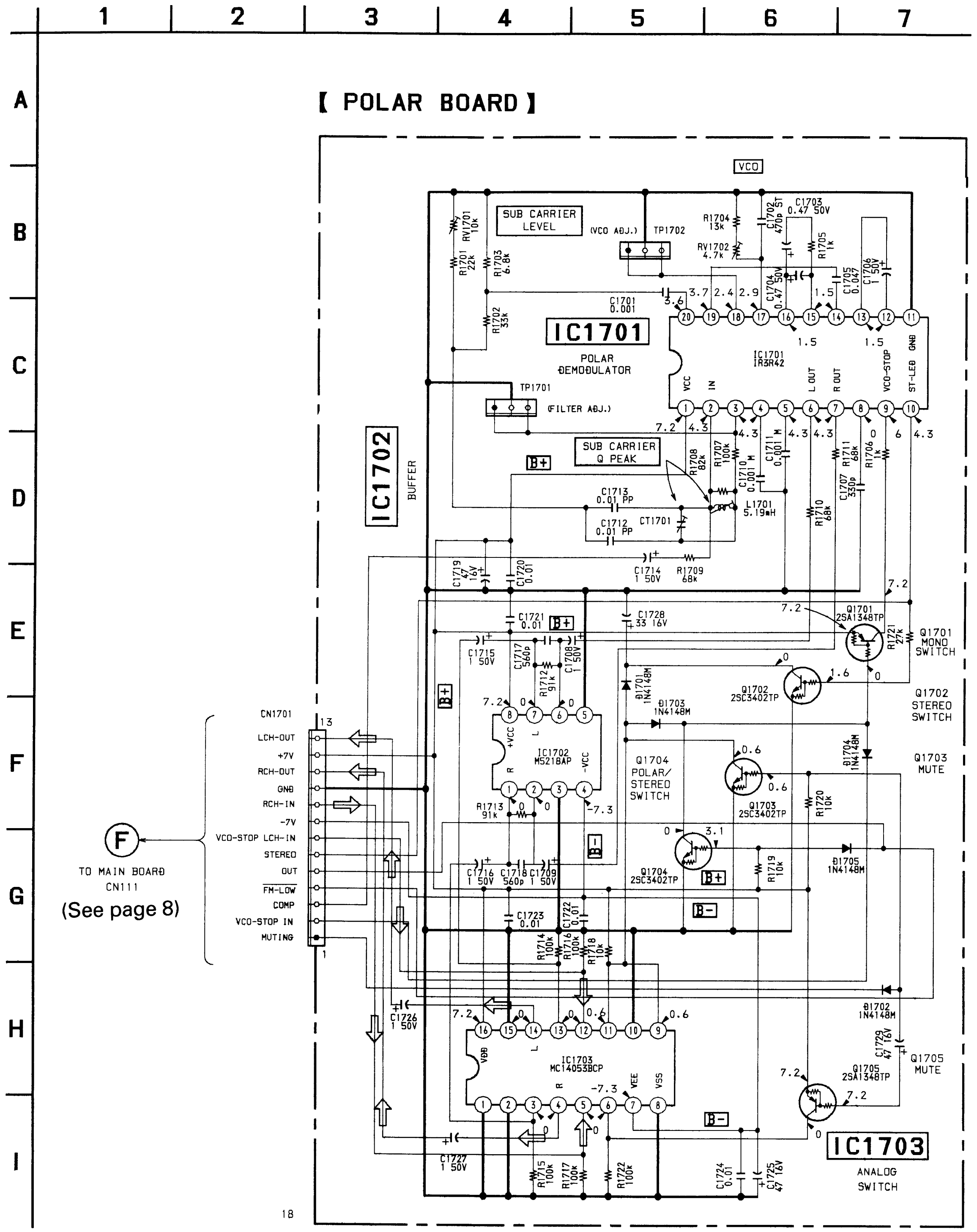
Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

• Semiconductor Location

Ref. No.	Location
D901	E-15
D902	E-15
D904	C-8
D905	C-8
D906	E-13
D907	E-13
D908	F-10
D909	G-10
D910	G-11
D911	G-11
D912	G-12
D953	H-3
IC901	C-11
IC902	E-9
IC904	F-18
IC905	D-8
Q901	D-7
Q902	C-8
Q903	C-9
Q904	D-13

1-9. SCHEMATIC DIAGRAM—POLAR Section— (CIS model)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
【 POLAR BOARD 】
VCO
SUB CARRIER LEVEL
(VCO ADJ.)
TP1702
IC1701
POLAR DEMODULATOR
IR3R42
TP1701
(FILTER ADJ.)
SUB CARRIER Q PEAK
B+
B−
IC1702
BUFFER
M5218AP
Q1701 MONO SWITCH
Q1702 STEREO SWITCH
Q1703 MUTE
Q1704 POLAR/ STEREO SWITCH
Q1705 MUTE
2SA1348TP
2SC3402TP
1N4148M
IC1703
MC14053BCP
ANALOG SWITCH
CN1701
LCH-OUT
+7V
RCH-OUT
GND
RCH-IN
-7V
VCO-STOP LCH-IN
STEREO
OUT
FM-LOW
COMP
VCO-STOP IN
MUTING
F
TO MAIN BOARD CN111
(See page 8)

Note on Schematic Diagram:

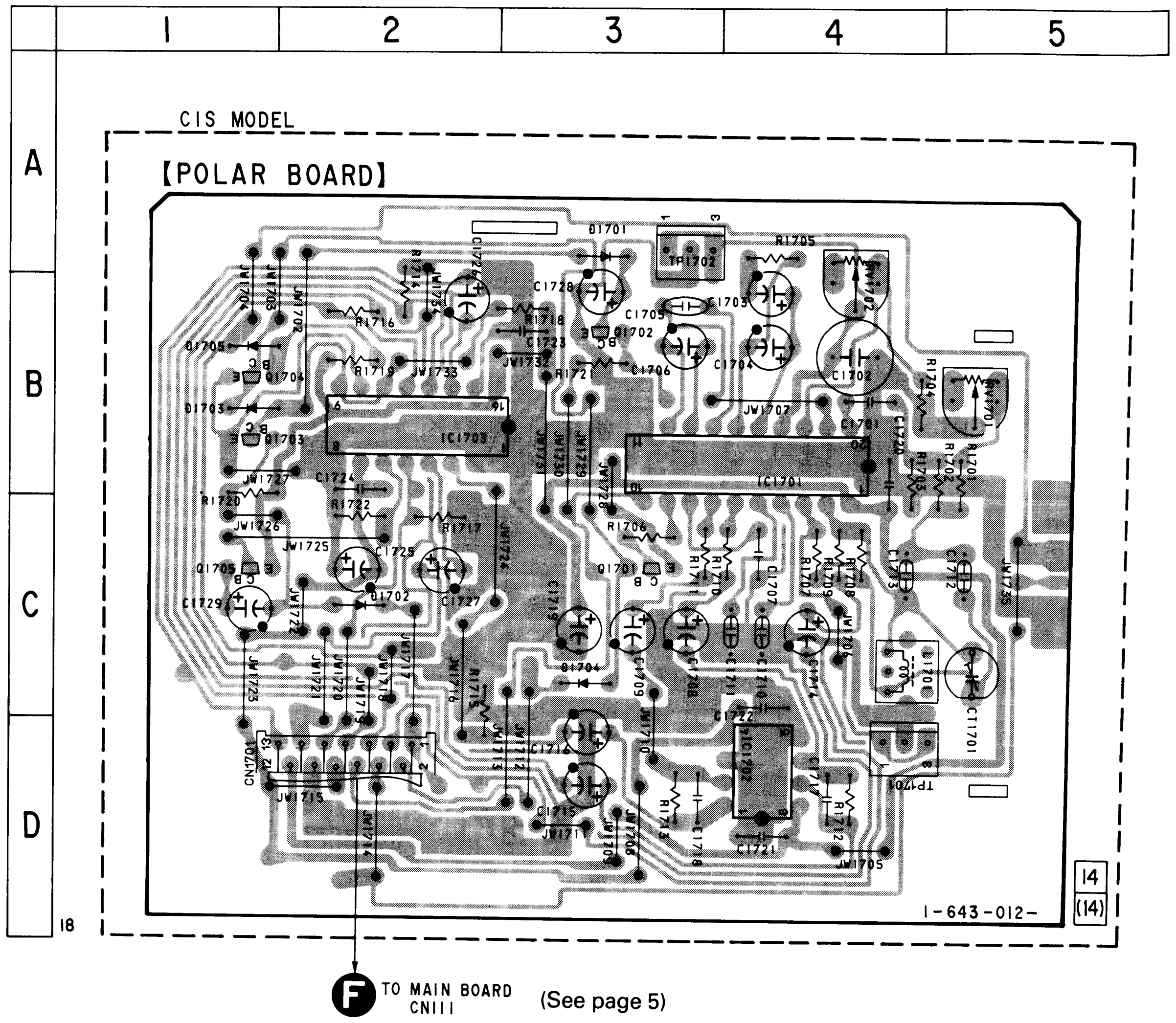
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^{1}/_{4}$W or less unless otherwise specified.
- B+ : B+ Line
- B− : B− Line
- ▭ : adjustment for repair.
- Voltage is dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

1-10. PRINTED WIRING BOARD—POLAR Section— (CIS model)

- **See page 25-27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.**

• Semiconductor Location

Ref. No.	Location
D1701	A-3
D1702	C-2
D1703	B-1
D1704	C-3
D1705	B-1
IC1701	B-3
IC1702	D-4
IC1703	B-2
Q1701	C-3
Q1702	B-3
Q1703	B-1
Q1704	B-1
Q1705	C-1

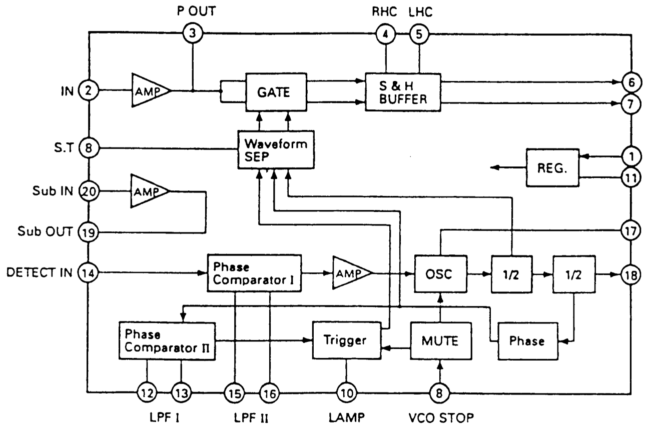

1
2
3
4
5
A
B
C
D
CIS MODEL
[POLAR BOARD]
IC1701
IC1702
IC1703
CN1701
TP1702
TP1701
1-643-012-
14
(14)
18
F
TO MAIN BOARD CNIII
(See page 5)

Note on Printed Wiring Board:

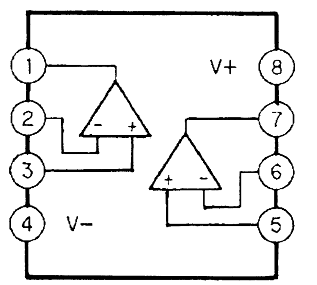
- ○—— : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.

• IC Block Diagrams

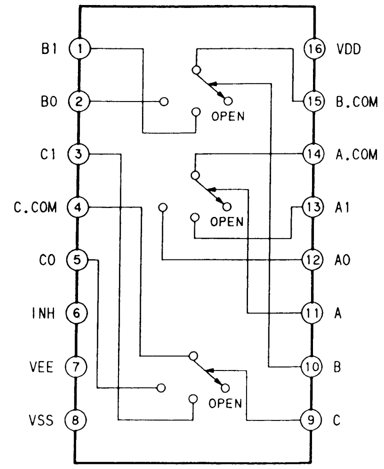
IC1701 IR3R42


P OUT
RHC
LHC
IN
AMP
GATE
S & H BUFFER
R OUT
L OUT
S.T
Waveform SEP
REG.
Vcc
GNG
Sub IN
Sub OUT
VCO
DETECT IN
Phase Comparator I
OSC
1/2
MON
Phase Comparator II
Trigger
MUTE
Phase
LPF I
LPF II
LAMP
VCO STOP

IC1702 M5218AP


1
2
3
4
5
6
7
8
V+
V−

IC1703 μPD4053BC


B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN

---

2. ELECTRI

CD

NOTE:

- Due to standardi
  the parts list ma
  parts specified i
  components use
- –XX and –X me
  they may have s
  original one.
- RESISTORS
  All resistors are
  METAL: Metal-
  METAL OXIDE
  resistor.
  F: nonflammabl

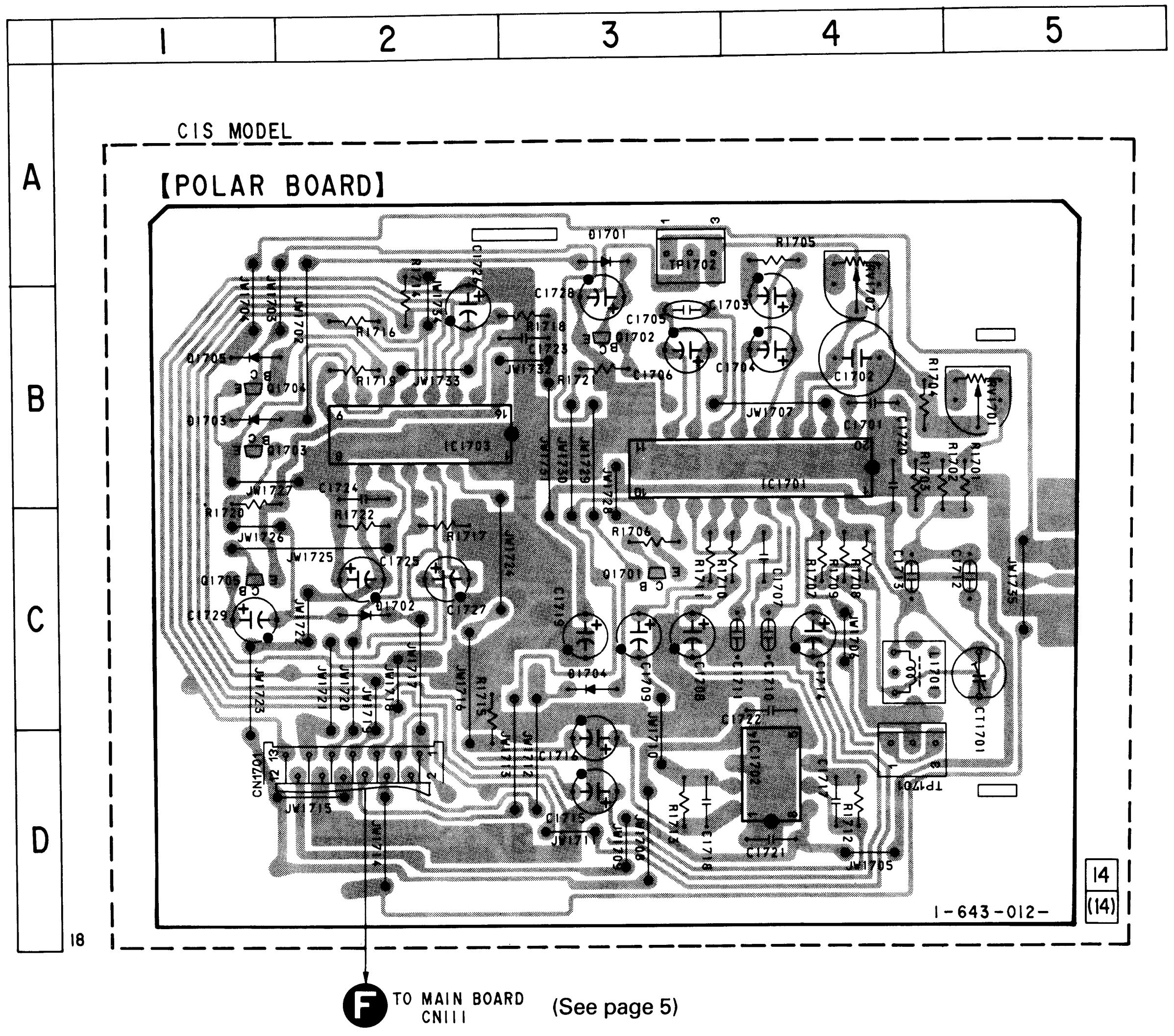
Ref. No.	Part
*	A-436
B103	1-412-
B104	1-412-
B105	1-412-
B119	1-412-
B184	1-412-
B308	1-412-
B312	1-412-
B313	1-412-
C111	1-124-
C112	1-164-
C113	1-124-
C114	1-124-
C115	1-124-
C117	1-164-
C118	1-124-
C121	1-164-
C122	1-124-
C131	1-162-
C132	1-124-
C151	1-162-
C152	1-136-
C153	1-162-
C154	1-162-
C155	1-136-
C170	1-164-
C171	1-124-
C172	1-124-
C173	1-124-
C174	1-164-
C175	1-124-
C176	1-164-
C177	1-124-
C178	1-124-

1-10. PRINTED WIRING BOARD—POLAR Section— (CIS model)

- **See page 25–27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.**

• Semiconductor Location

Ref. No.	Location
D1701	A - 3
D1702	C - 2
D1703	B - 1
D1704	C - 3
D1705	B - 1
IC1701	B - 3
IC1702	D - 4
IC1703	B - 2
Q1701	C - 3
Q1702	B - 3
Q1703	B - 1
Q1704	B - 1
Q1705	C - 1

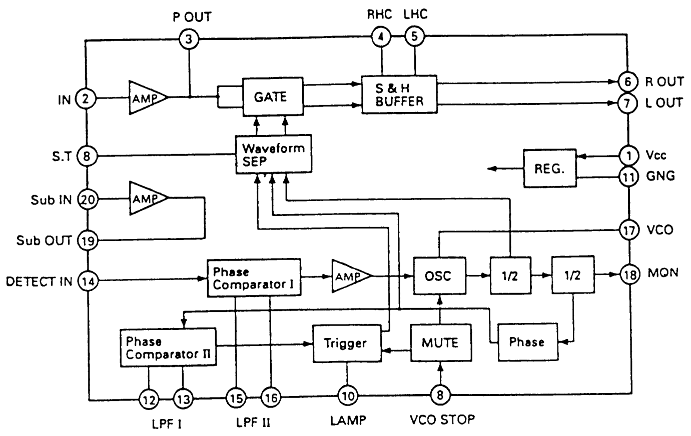

1
2
3
4
5
A
B
C
D
CIS MODEL
[POLAR BOARD]
D1701
R1705
TP1702
Q1703
Q1702
C1705
C1708
IC1703
IC1701
IC1702
Q1701
D1704
D1705
D1703
Q1704
Q1705
C1701
C1721
CN1701
JW1715
JW1705
TP1701
1-643-012-
14
(14)
18
F
TO MAIN BOARD CNIII
(See page 5)

Note on Printed Wiring Board:

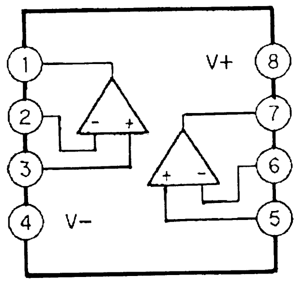
- o—— : parts extracted from the component side.
- ░ : Pattern on the side which is seen.

• IC Block Diagrams

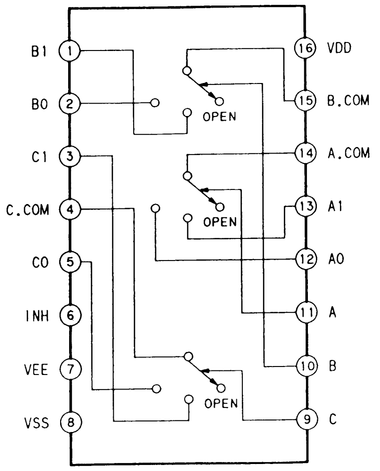
IC1701 IR3R42


P OUT
RHC LHC
IN
AMP
GATE
S & H BUFFER
R OUT
L OUT
S.T
Waveform SEP
Vcc
GNG
REG.
Sub IN
AMP
Sub OUT
VCO
DETECT IN
Phase Comparator I
AMP
OSC
1/2
1/2
MON
Phase Comparator II
Trigger
MUTE
Phase
LPF I
LPF II
LAMP
VCO STOP

IC1702 M5218AP



IC1703 µPD4053BC


B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

2. ELECTRICAL PARTS LIST

CD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- –XX and –X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA··· : µA···, uPA··· : µPA···, uPB··· : µPB···, uPC··· : µPC···, uPD··· : µPD···
- CAPACITORS
  uF : µF
- COILS
  uH : µH
- Abbreviations

AUS : Australian	IT : Italian
CND : Canadian	MY : Malaysia
EA : Saudi Arabia	MX : Mexican
EE : East European	SP : Singapore
G : German	

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les components identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-4369-799-A	CD BOARD, COMPLETE ******************			
		< INDUCTOR >			
B103	1-412-473-21	INDUCTOR	OUH		
B104	1-412-473-21	INDUCTOR	OUH		
B105	1-412-473-21	INDUCTOR	OUH		
B119	1-412-473-21	INDUCTOR	OUH		
B184	1-412-473-21	INDUCTOR	OUH		
B308	1-412-473-21	INDUCTOR	OUH		
B312	1-412-473-21	INDUCTOR	OUH		
B313	1-412-473-21	INDUCTOR	OUH		
		< CAPACITOR >			
C111	1-124-472-11	ELECT	470uF	20%	10V
C112	1-164-159-11	CERAMIC	0. 1uF		50V
C113	1-124-903-11	ELECT	1uF	20%	50V
C114	1-124-443-00	ELECT	100uF	20%	10V
C115	1-124-903-11	ELECT	1uF	20%	50V
C117	1-164-159-11	CERAMIC	0. 1uF		50V
C118	1-124-443-00	ELECT	100uF	20%	10V
C121	1-164-159-11	CERAMIC	0. 1uF		50V
C122	1-124-472-11	ELECT	470uF	20%	10V
C131	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C132	1-124-472-11	ELECT	470uF	20%	10V
C151	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C152	1-136-173-00	FILM	0. 47uF	5%	50V
C153	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C154	1-162-301-11	CERAMIC	0. 0015uF	30%	16V
C155	1-136-161-00	FILM	0. 047uF	5%	50V
C170	1-164-159-11	CERAMIC	0. 1uF		50V
C171	1-124-443-00	ELECT	100uF	20%	10V
C172	1-124-903-11	ELECT	1uF	20%	50V
C173	1-124-903-11	ELECT	1uF	20%	50V
C174	1-164-159-11	CERAMIC	0. 1uF		50V
C175	1-124-604-00	ELECT	330uF	20%	10V
C176	1-164-159-11	CERAMIC	0. 1uF		50V
C177	1-124-916-11	ELECT	22uF	20%	63V
C178	1-124-473-11	ELECT	1000uF	20%	10V
C181	1-164-159-11	CERAMIC	0. 1uF		50V
C201	1-136-165-00	FILM	0. 1uF	5%	50V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-136-165-00	FILM	0. 1uF	5%	50V
C204	1-124-443-00	ELECT	100uF	20%	10V
C206	1-124-443-00	ELECT	100uF	20%	10V
C207	1-136-165-00	FILM	0. 1uF	5%	50V
C208	1-164-019-11	CERAMIC	10PF	0. 5PF	50V
C209	1-164-019-11	CERAMIC	10PF	0. 5PF	50V
C211	1-130-475-00	MYLAR	0. 0022uF	5%	50V
C212	1-130-475-00	MYLAR	0. 0022uF	5%	50V
C213	1-124-907-11	ELECT	10uF	20%	50V
C214	1-124-907-11	ELECT	10uF	20%	50V
C251	1-162-600-11	CERAMIC	0. 0047uF	20%	16V
C252	1-162-294-31	CERAMIC	0. 001uF	10%	50V
C253	1-164-159-11	CERAMIC	0. 1uF		50V
C254	1-164-159-11	CERAMIC	0. 1uF		50V
C301	1-164-159-11	CERAMIC	0. 1uF		50V
C399	1-162-284-31	CERAMIC	150PF	10%	50V
C999	1-164-159-11	CERAMIC	0. 1uF		50V
		< CONNECTOR >			
* CN101	1-568-822-11	SOCKET, CONNECTOR 22P			
* CN102	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN103	1-506-468-11	PIN, CONNECTOR 3P			
* CN104	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
* CN105	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P			
CN106	1-568-802-11	SOCKET, CONNECTOR 19P			
* CN107	1-568-951-11	PIN, CONNECTOR 2P			
		< DIODE >			
D102	8-719-109-98	DIODE	RD6. 8ES-B3		
D103	8-719-010-29	DIODE	UZ-4. 3BSB		
D104	8-719-987-63	DIODE	1N4148M		
D107	8-719-109-87	DIODE	RD5. 6ES-B		
D181	8-719-200-82	DIODE	11ES2		
D300	8-719-200-82	DIODE	11ES2		

Ref. No.	Part No.	Description	Remark
		< IC >	
IC101	8-759-821-93	IC LA5601	
IC102	8-759-165-81	IC PST600D-T	
IC103	8-759-291-61	IC uPD78054GC-025-3B9	
IC104	8-759-277-68	IC LB1648	
IC106	8-759-277-67	IC TC9293N	
IC107	8-752-371-46	IC CXD2507Q	
IC109	8-759-821-93	IC LA5601	
		< COIL >	
L300	1-410-525-11	INDUCTOR 220uH	
L301	1-410-525-11	INDUCTOR 220uH	
		< TRANSISTOR >	
Q101	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q102	8-729-900-80	TRANSISTOR DTC114ES	
Q103	8-729-900-80	TRANSISTOR DTC114ES	
Q300	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q301	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R107	1-249-429-11	CARBON 10K 5% 1/4W	
R108	1-249-429-11	CARBON 10K 5% 1/4W	
R109	1-249-429-11	CARBON 10K 5% 1/4W	
R110	1-249-429-11	CARBON 10K 5% 1/4W	
R111	1-249-425-11	CARBON 4.7K 5% 1/4W	
R112	1-249-425-11	CARBON 4.7K 5% 1/4W	
R113	1-249-425-11	CARBON 4.7K 5% 1/4W	
R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
R115	1-249-425-11	CARBON 4.7K 5% 1/4W	
R116	1-249-425-11	CARBON 4.7K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-429-11	CARBON 10K 5% 1/4W	
R119	1-249-429-11	CARBON 10K 5% 1/4W	
R120	1-249-429-11	CARBON 10K 5% 1/4W	
R121	1-247-807-31	CARBON 100 5% 1/4W	
R122	1-247-807-31	CARBON 100 5% 1/4W	
R123	1-247-807-31	CARBON 100 5% 1/4W	
R124	1-247-807-31	CARBON 100 5% 1/4W	
R125	1-247-807-31	CARBON 100 5% 1/4W	
R126	1-249-425-11	CARBON 4.7K 5% 1/4W	
R127	1-249-429-11	CARBON 10K 5% 1/4W	
R128	1-249-393-11	CARBON 10 5% 1/4W	
R129	1-249-423-11	CARBON 3.3K 5% 1/4W	
R130	1-249-423-11	CARBON 3.3K 5% 1/4W	
R131	1-249-423-11	CARBON 3.3K 5% 1/4W	
R132	1-249-423-11	CARBON 3.3K 5% 1/4W	
R133	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R134	1-249-429-11	CARBON 10K 5% 1/4W	
R135	1-247-807-31	CARBON 100 5% 1/4W	
R136	1-247-807-31	CARBON 100 5% 1/4W	
R137	1-247-807-31	CARBON 100 5% 1/4W	
R138	1-247-807-31	CARBON 100 5% 1/4W	
R139	1-249-415-11	CARBON 680 5% 1/4W	
R141	1-249-417-11	CARBON 1K 5% 1/4W	
R143	1-247-896-11	CARBON 510K 5% 1/4W	
R145	1-249-423-11	CARBON 3.3K 5% 1/4W	
R147	1-249-423-11	CARBON 3.3K 5% 1/4W	
R148	1-249-413-11	CARBON 470 5% 1/4W	
R149	1-247-807-31	CARBON 100 5% 1/4W	
R151	1-249-418-11	CARBON 1.2K 5% 1/4W	
R152	1-249-418-11	CARBON 1.2K 5% 1/4W	
R153	1-249-441-11	CARBON 100K 5% 1/4W	
R154	1-249-429-11	CARBON 10K 5% 1/4W	
R155	1-249-423-11	CARBON 3.3K 5% 1/4W	
R156	1-249-423-11	CARBON 3.3K 5% 1/4W	
R157	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-409-11	CARBON 220 5% 1/4W	
R211	1-249-409-11	CARBON 220 5% 1/4W	
R212	1-249-409-11	CARBON 220 5% 1/4W	
R300	1-260-064-11	CARBON 1 5% 1/2W	
R301	1-249-421-11	CARBON 2.2K 5% 1/4W	
R302	1-249-421-11	CARBON 2.2K 5% 1/4W	
R303	1-249-430-11	CARBON 12K 5% 1/4W	
R304	1-249-430-11	CARBON 12K 5% 1/4W	
R305	1-249-429-11	CARBON 10K 5% 1/4W	
R306	1-249-417-11	CARBON 1K 5% 1/4W	
R307	1-249-425-11	CARBON 4.7K 5% 1/4W	
R309	1-260-064-11	CARBON 1 5% 1/2W	
R310	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< VIBRATOR >	
X101	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X201	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	

****

* A-4371-704-A CD SW BOARD, COMPLETE

****

Ref. No.	Part No.	Description	Remark
		< FERRITE BEAD >	
B854	1-414-386-11	INDUCTOR, FERRITE BEAD	
		< CONNECTOR >	
CN801	1-766-522-11	HOUSING, CONNECTOR 19P	

CD SW

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D801	8-719-301-43	LED SEL2410E-C-TP6 (DISC 1)	
D802	8-719-301-43	LED SEL2410E-C-TP6 (DISC 2)	
D803	8-719-301-43	LED SEL2410E-C-TP6 (DISC 3)	
D804	8-719-301-43	LED SEL2410E-C-TP6 (DISC 4)	
D805	8-719-301-43	LED SEL2410E-C-TP6 (DISC 5)	
D806	8-719-301-59	LED SEL2910A (DISC 1)	
D807	8-719-301-59	LED SEL2910A (DISC 2)	
D808	8-719-301-59	LED SEL2910A (DISC 3)	
D809	8-719-301-59	LED SEL2910A (DISC 4)	
D810	8-719-301-59	LED SEL2910A (DISC 5)	
		< JUMPER RESISTOR >	
JW853	1-216-296-00	METAL CHIP 0 5% 1/8W	
		< TRANSISTOR >	
Q801	8-729-602-36	TRANSISTOR 2SA1602	
Q802	8-729-602-36	TRANSISTOR 2SA1602	
Q803	8-729-602-21	TRANSISTOR 2SC4154	
Q804	8-729-602-21	TRANSISTOR 2SC4154	
Q805	8-729-602-21	TRANSISTOR 2SC4154	
Q806	8-729-602-21	TRANSISTOR 2SC4154	
Q807	8-729-602-21	TRANSISTOR 2SC4154	
		< RESISTOR >	
R801	1-216-041-00	METAL CHIP 470 5% 1/10W	
R802	1-216-041-00	METAL CHIP 470 5% 1/10W	
R803	1-216-041-00	METAL CHIP 470 5% 1/10W	
R804	1-216-045-00	METAL CHIP 680 5% 1/10W	
R805	1-216-045-00	METAL CHIP 680 5% 1/10W	
R806	1-216-045-00	METAL CHIP 680 5% 1/10W	
R807	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R808	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R809	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R810	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R811	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R812	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R813	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R814	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R815	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R816	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R817	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R818	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R819	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R820	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R821	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R831	1-216-037-00	METAL CHIP 330 5% 1/10W	
R832	1-216-029-00	METAL CHIP 150 5% 1/10W	
R833	1-216-029-00	METAL CHIP 150 5% 1/10W	
R834	1-216-029-00	METAL CHIP 150 5% 1/10W	
R835	1-216-037-00	METAL CHIP 330 5% 1/10W	
R836	1-216-037-00	METAL CHIP 330 5% 1/10W	
R837	1-216-029-00	METAL CHIP 150 5% 1/10W	
R838	1-216-029-00	METAL CHIP 150 5% 1/10W	
R839	1-216-029-00	METAL CHIP 150 5% 1/10W	
R840	1-216-037-00	METAL CHIP 330 5% 1/10W	
R841	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R842	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R843	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R844	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R845	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R846	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R847	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R848	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R849	1-216-073-00	METAL CHIP 10K 5% 1/10W	
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (⏭)	
S802	1-554-303-21	SWITCH, TACTILE (⏮)	
S803	1-554-303-21	SWITCH, TACTILE (■)	
S804	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S805	1-554-303-21	SWITCH, TACTILE (DISC 1 ⏏)	
S806	1-554-303-21	SWITCH, TACTILE (▶)	
S807	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S808	1-554-303-21	SWITCH, TACTILE (DISC 2 ⏏)	
S809	1-554-303-21	SWITCH, TACTILE (❚❚)	
S810	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S811	1-554-303-21	SWITCH, TACTILE (DISC 3 ⏏)	
S813	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S814	1-554-303-21	SWITCH, TACTILE (DISC 4 ⏏)	
S815	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S816	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S817	1-554-303-21	SWITCH, TACTILE (DISC 5 ⏏)	
S818	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S819	1-554-303-21	SWITCH, TACTILE (EDIT)	
S820	1-554-303-21	SWITCH, TACTILE (CHECK)	
S821	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S822	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S823	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S824	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S8001	1-572-126-11	SWITCH, PUSH (1 KEY) (PANEL SW)	

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Ref. No.	Part No.	Description			Remark
*	A-4369-828-A	FL BOARD, COMPLETE (US, CND, MX)			
*	A-4369-829-A	FL BOARD, COMPLETE (E, AUS, EA, MY, SP, PX)			
*	A-4369-849-A	FL BOARD, COMPLETE (AEP, UK)			
*	A-4369-850-A	FL BOARD, COMPLETE (G)			
*	A-4369-851-A	FL BOARD, COMPLETE (IT)			
*	A-4369-852-A	FL BOARD, COMPLETE (CIS)			
*	A-4371-476-A	FL BOARD, COMPLETE (EE)			
		******************			
*	4-955-901-01	CUSHION (FL)			
*	4-959-227-01	HOLDER, LED			
		< CAPACITOR >			
C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C902	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C903	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C904	1-124-261-00	ELECT	10uF	20%	50V
C905	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C906	1-124-584-00	ELECT	100uF	20%	10V
C907	1-126-160-11	ELECT	1uF	20%	50V
C908	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C909	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C910	1-126-157-11	ELECT	10uF	20%	16V
C911	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C912	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C913	1-124-584-00	ELECT	100uF	20%	10V
C914	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C915	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C916	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C917	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C918	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C919	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C920	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C921	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C922	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C923	1-124-261-00	ELECT	10uF	20%	50V
C924	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C925	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C926	1-124-257-00	ELECT	2.2uF	20%	50V
C927	1-124-257-00	ELECT	2.2uF	20%	50V
C928	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C929	1-124-465-00	ELECT	0.47uF	20%	50V
C930	1-124-257-00	ELECT	2.2uF	20%	50V
C931	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C932	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C933	1-124-257-00	ELECT	2.2uF	20%	50V
C934	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C935	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C936	1-124-257-00	ELECT	2.2uF	20%	50V
C937	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C938	1-124-257-00	ELECT	2.2uF	20%	50V
C939	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C940	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CN901	1-766-320-11	HOUSING, CONNECTOR 21P			
CN902	1-691-644-11	SOCKET, CONNECTOR 7P			
		< DIODE >			
D901	8-719-106-08	DIODE	RD6.2M-B2		
D902	8-719-104-34	DIODE	1S2836		
D904	8-719-041-97	DIODE	MA113-TX		
D905	8-719-041-97	DIODE	MA113-TX		
D906	8-719-041-97	DIODE	MA113-TX		
D907	8-719-106-08	DIODE	RD6.2M-B2		
D908	8-719-990-39	DIODE	DCB010		
D909	8-719-990-39	DIODE	DCB010		
D910	8-719-990-39	DIODE	DCB010		
D911	8-719-990-39	DIODE	DCB010		
D912	8-719-990-39	DIODE	DCB010		
D953	8-719-313-64	LED	SEL3210S-CD		
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-517-307-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-759-290-60	IC	uPD78042GF-073-3B9		
IC902	8-759-504-12	IC	X24C01S		
IC904	8-749-923-64	IC	NJM32H400		
IC905	8-759-167-83	IC	PST600EMT-T1		
		< COIL >			
L901	1-408-789-21	INDUCTOR CHIP	100uH		
L902	1-408-789-21	INDUCTOR CHIP	100uH		
		< TRANSISTOR >			
Q901	8-729-602-21	TRANSISTOR	2SC4154		
Q902	8-729-805-65	TRANSISTOR	2SA1344		
Q903	8-729-805-41	TRANSISTOR	2SC3398		
Q904	8-729-602-21	TRANSISTOR	2SC4154		
		< RESISTOR >			
R901	1-216-062-00	METAL CHIP	3.6K	5%	1/10W (US, CND, MX)
R901	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (E, AUS, EA, MY, SP, PX)
R901	1-216-295-91	METAL GLAZE	0	5%	1/10W (AEP, UK, EE)

FL

Ref. No.	Part No.	Description	Remark
R901	1-216-041-00	METAL CHIP 470 5% 1/10W	(G)
R901	1-216-050-00	METAL GLAZE 1.1K 5% 1/10W	(IT)
R901	1-216-081-00	METAL CHIP 22K 5% 1/10W	(CIS)
R902	1-216-025-00	METAL CHIP 100 5% 1/10W	
R903	1-216-025-00	METAL CHIP 100 5% 1/10W	
R904	1-216-025-00	METAL CHIP 100 5% 1/10W	
R905	1-216-025-00	METAL CHIP 100 5% 1/10W	
R906	1-216-025-00	METAL CHIP 100 5% 1/10W	
R907	1-216-025-00	METAL CHIP 100 5% 1/10W	
R908	1-216-025-00	METAL CHIP 100 5% 1/10W	
R909	1-216-025-00	METAL CHIP 100 5% 1/10W	
R910	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R911	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R912	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R913	1-216-025-00	METAL CHIP 100 5% 1/10W	
R914	1-216-025-00	METAL CHIP 100 5% 1/10W	
R915	1-216-025-00	METAL CHIP 100 5% 1/10W	
R916	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R917	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R918	1-216-025-00	METAL CHIP 100 5% 1/10W	
R919	1-216-025-00	METAL CHIP 100 5% 1/10W	
R920	1-216-025-00	METAL CHIP 100 5% 1/10W	
R921	1-216-025-00	METAL CHIP 100 5% 1/10W	
R922	1-216-025-00	METAL CHIP 100 5% 1/10W	
R923	1-216-025-00	METAL CHIP 100 5% 1/10W	
R924	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R925	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R926	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R927	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R928	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R929	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R930	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R931	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R932	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R933	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R934	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R935	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R936	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R937	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R938	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R939	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R940	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R941	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R942	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R943	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R944	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R947	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R948	1-216-025-00	METAL CHIP 100 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R949	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R950	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R951	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R952	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R953	1-216-037-00	METAL CHIP 330 5% 1/10W	
R954	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R955	1-216-025-00	METAL CHIP 100 5% 1/10W	
R956	1-216-027-00	METAL CHIP 120 5% 1/10W	
R957	1-216-027-00	METAL CHIP 120 5% 1/10W	
R958	1-216-029-00	METAL CHIP 150 5% 1/10W	
R970	1-216-025-00	METAL CHIP 100 5% 1/10W	
R971	1-216-027-00	METAL CHIP 120 5% 1/10W	
R972	1-216-027-00	METAL CHIP 120 5% 1/10W	
R973	1-216-029-00	METAL CHIP 150 5% 1/10W	
R974	1-216-031-00	METAL CHIP 180 5% 1/10W	
R975	1-216-033-00	METAL CHIP 220 5% 1/10W	
R976	1-216-035-00	METAL CHIP 270 5% 1/10W	
R980	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R981	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R982	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R983	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R985	1-216-044-00	METAL CHIP 620 5% 1/10W	
R986	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R987	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R988	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R989	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R990	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R991	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R992	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R993	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R994	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R995	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R996	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R997	1-216-072-00	METAL CHIP 9.1K 5% 1/10W	
R998	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R999	1-216-025-00	METAL CHIP 100 5% 1/10W	
R1000	1-216-049-00	METAL CHIP 1K 5% 1/10W	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S901	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S903	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S904	1-554-303-21	SWITCH, TACTILE (DAILY)	
S905	1-554-303-21	SWITCH, TACTILE (REC TIMER)	
S906	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S913	1-554-303-21	SWITCH, TACTILE (EQ PRESET)	
S914	1-554-303-21	SWITCH, TACTILE (MEMORY/NEXT)	
S915	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
S916	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)	
S917	1-554-303-21	SWITCH, TACTILE (PRESET/TUNING)	

Ref. No.	Part No.	Description	Remark
S918	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER+)	
S919	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER-)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X901	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
X902	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	

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Ref. No.	Part No.	Description	Remark
*	1-652-286-11	HP BOARD	

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< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C501	1-163-135-00	CERAMIC CHIP	560PF 5% 50V
C502	1-165-319-11	CERAMIC CHIP	0.1uF 50V
C551	1-163-135-00	CERAMIC CHIP	560PF 5% 50V
C552	1-165-319-11	CERAMIC CHIP	0.1uF 50V

< JACK >

Ref. No.	Part No.	Description	Remark
J501	1-766-318-11	JACK (HEADPHONES)	

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Ref. No.	Part No.	Description	Remark
*	A-4369-820-A	MAIN BOARD, COMPLETE (US, CND, MX)	
*	A-4369-821-A	MAIN BOARD, COMPLETE (E, AUS, EA, MY, SP, PX)	
*	A-4369-846-A	MAIN BOARD, COMPLETE (AEP, UK)	
*	A-4369-847-A	MAIN BOARD, COMPLETE (G, IT)	
*	A-4371-475-A	MAIN BOARD, COMPLETE (EE)	
*	A-4371-477-A	MAIN BOARD, COMPLETE (CIS)	

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Ref. No.	Part No.	Description	Remark
*	4-886-555-00	HEAT SINK	
*	4-924-988-11	PLATE (ST), GROUND	
	7-685-646-81	SCREW +BVTP 3X8 TYPE2	

< INDUCTOR >

Ref. No.	Part No.	Description	Remark
B242	1-412-473-21	INDUCTOR	0UH (E, AUS, EA, MY, SP, PX)

< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C101	1-124-925-11	ELECT	2.2uF 20% 100V (AEP, UK, G, IT, EE, CIS)
C102	1-162-282-31	CERAMIC	100PF 10% 50V (AEP, UK, EE, CIS)
C102	1-162-286-31	CERAMIC	220PF 10% 50V (G, IT)
C103	1-162-219-31	CERAMIC	68PF 5% 50V (AEP, UK, G, IT, EE, CIS)
C104	1-124-927-11	ELECT	4.7uF 20% 100V (AEP, UK, G, IT, EE, CIS)
C105	1-162-301-11	CERAMIC	0.0015uF 30% 16V (AEP, UK, G, IT, EE, CIS)
C106	1-162-600-11	CERAMIC	0.0047uF 30% 16V (AEP, UK, G, IT, EE, CIS)
C107	1-124-903-11	ELECT	1uF 20% 50V (AEP, UK, G, IT, EE, CIS)
C108	1-124-443-00	ELECT	100uF 20% 10V (AEP, UK, G, IT, EE, CIS)
C109	1-124-927-11	ELECT	4.7uF 20% 100V
C113	1-124-925-11	ELECT	2.2uF 20% 100V
C116	1-124-925-11	ELECT	2.2uF 20% 100V
C117	1-162-306-11	CERAMIC	0.01uF 30% 16V
C118	1-162-306-11	CERAMIC	0.01uF 30% 16V
C119	1-162-282-31	CERAMIC	100PF 10% 50V
C120	1-162-282-31	CERAMIC	100PF 10% 50V
C121	1-124-464-11	ELECT	0.22uF 20% 50V
C122	1-124-464-11	ELECT	0.22uF 20% 50V
C133	1-130-488-00	MYLAR	0.027uF 5% 50V
C134	1-130-488-00	MYLAR	0.027uF 5% 50V
C136	1-162-282-31	CERAMIC	100PF 10% 50V
C139	1-162-286-31	CERAMIC	220PF 10% 50V (G, IT)
C140	1-162-286-31	CERAMIC	220PF 10% 50V (G, IT)
C142	1-162-303-11	CERAMIC	0.0033uF 20% 16V
C143	1-162-303-11	CERAMIC	0.0033uF 20% 16V
C144	1-161-046-00	CERAMIC	3900PF 10% 50V (CIS)
C145	1-161-046-00	CERAMIC	3900PF 10% 50V (CIS)
C149	1-124-477-11	ELECT	47uF 20% 25V
C150	1-124-927-11	ELECT	4.7uF 20% 100V
C151	1-124-925-11	ELECT	2.2uF 20% 100V (AEP, UK, G, IT, EE, CIS)
C152	1-162-282-31	CERAMIC	100PF 10% 50V (AEP, UK, EE, CIS)
C152	1-162-286-31	CERAMIC	220PF 10% 50V (G, IT)
C153	1-162-219-31	CERAMIC	68PF 5% 50V (AEP, UK, G, IT, EE, CIS)
C154	1-124-927-11	ELECT	4.7uF 20% 100V (AEP, UK, G, IT, EE, CIS)
C155	1-162-301-11	CERAMIC	0.0015uF 30% 16V (AEP, UK, G, IT, EE, CIS)
C156	1-162-600-11	CERAMIC	0.0047uF 30% 16V (AEP, UK, G, IT, EE, CIS)
C157	1-124-903-11	ELECT	1uF 20% 50V (AEP, UK, G, IT, EE, CIS)
C158	1-124-443-00	ELECT	100uF 20% 10V (AEP, UK, G, IT, EE, CIS)
C159	1-124-927-11	ELECT	4.7uF 20% 100V
C163	1-164-159-11	CERAMIC	0.1uF 50V

MAIN

Ref. No.	Part No.	Description				Remark
C166	1-130-490-11	MYLAR	0.039uF	5%	50V	
C167	1-130-490-11	MYLAR	0.039uF	5%	50V	
C168	1-106-353-00	MYLAR	0.0027uF	5%	50V	
C169	1-106-353-00	MYLAR	0.0027uF	5%	50V	
C170	1-162-293-31	CERAMIC	820PF	10%	50V	
C171	1-162-293-31	CERAMIC	820PF	10%	50V	
C172	1-124-477-11	ELECT	47uF	20%	25V	
C173	1-124-477-11	ELECT	47uF	20%	25V	
C186	1-162-282-31	CERAMIC	100PF	10%	50V	
C190	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C191	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C199	1-164-159-11	CERAMIC	0.1uF		50V	
C201	1-162-290-31	CERAMIC	470PF	10%	50V	(US, CND, MX)
C202	1-162-306-11	CERAMIC	0.01uF	30%	16V	(US, CND, MX)
C203	1-162-290-31	CERAMIC	470PF	10%	50V	(US, CND, MX)
C702	1-126-927-11	ELECT	2200uF	20%	10V	
C703	1-126-927-11	ELECT	2200uF	20%	10V	
C704	1-124-925-11	ELECT	2.2uF	20%	100V	
C705	1-124-927-11	ELECT	4.7uF	20%	100V	
C706	1-164-159-11	CERAMIC	0.1uF		50V	
C707	1-124-442-00	ELECT	330uF	20%	6.3V	
C708	1-124-902-00	ELECT	0.47uF	20%	50V	
C709	1-161-494-00	CERAMIC	0.022uF		25V	
C710	1-124-907-11	ELECT	10uF	20%	50V	
C711	1-124-477-11	ELECT	47uF	20%	25V	
C712	1-126-101-11	ELECT	100uF	20%	16V	
C713	1-124-910-11	ELECT	47uF	20%	50V	
C714	1-124-910-11	ELECT	47uF	20%	50V	
C715	1-124-910-11	ELECT	47uF	20%	50V	
C716	1-126-101-11	ELECT	100uF	20%	16V	
C720	1-164-159-11	CERAMIC	0.1uF		50V	(E, AUS, EA, MY, SP, PX)
C722	1-164-159-11	CERAMIC	0.1uF		50V	(G, IT, E, AUS, EA, MY, SP, PX)
C723	1-164-159-11	CERAMIC	0.1uF		50V	(E, AUS, EA, MY, SP, PX)

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN101	1-691-650-11	SOCKET, CONNECTOR 19P	
CN102	1-766-321-11	SOCKET, CONNECTOR 21P	
CN103	1-695-330-31	PIN, CONNECTOR (PC BOARD) 7P	
CN104	1-691-648-11	SOCKET, CONNECTOR 15P	
* CN105	1-569-493-11	SOCKET, CONNECTOR 7P	
* CN111	1-568-832-11	SOCKET, CONNECTOR 13P	(CIS)
* CN701	1-766-529-11	CONNECTOR, BOARD TO BOARD 17P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D101	8-719-987-63	DIODE 1N4148M	
D102	8-719-000-60	DIODE UZL-6M2	
D703	8-719-987-63	DIODE 1N4148M	
D706	8-719-200-82	DIODE 11ES2	
D707	8-719-001-51	DIODE UZL-11H1	(EXCEPT EE, CIS)
D707	8-719-001-54	DIODE UZL-11H2	(EE, CIS)
D708	8-719-002-33	DIODE UZL-24L	

< FUSE >

Ref. No.	Part No.	Description	Remark
⚠F701	1-532-776-21	FUSE, MICRO (SECONDARY) (1A/125V)	(US, CND, MX)
⚠F702	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A/125V)	(US, CND, MX)

< IC LINK >

Ref. No.	Part No.	Description	Remark
⚠F701	1-532-839-11	LINK, IC (1A)	(EXCEPT US, CND, MX)
⚠F702	1-532-840-21	LINK, IC (1.25A)	(EXCEPT US, CND, MX)

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-634-50	IC M5218AL	(AEP, UK, G, IT, EE, CIS)
IC102	8-759-000-48	IC MC14052BCP	
IC103	8-759-000-48	IC MC14052BCP	
IC104	8-759-634-50	IC M5218AL	
IC106	8-759-635-31	IC M50253P	
IC112	8-759-634-50	IC M5218AL	
IC701	8-759-602-66	IC M5230L-A	
IC702	8-759-231-53	IC TA7805S	

< JACK >

Ref. No.	Part No.	Description	Remark
J101	1-569-181-41	JACK, PIN 2P (PHONO IN)	(AEP, UK, G, IT, EE, CIS)
J101	1-569-181-41	JACK, PIN 2P (MD/VIDEO IN)	(EXCEPT AEP, UK, G, IT, EE, CIS)

< COIL >

Ref. No.	Part No.	Description	Remark
L101	1-239-597-11	LOW-PASS FILTER	(CIS)
L102	1-239-597-11	LOW-PASS FILTER	(CIS)

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q105	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q106	8-729-900-63	TRANSISTOR DTA124ES	
Q107	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q108	8-729-900-80	TRANSISTOR DTC114ES	(CIS)
Q110	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q111	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q112	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q113	8-729-620-05	TRANSISTOR 2SC2603-EF	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
Q114	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q115	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q155	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-030-18	TRANSISTOR 2SD2525(TP)	
Q705	8-729-900-36	TRANSISTOR DTC124ES	
Q706	8-729-900-36	TRANSISTOR DTC124ES	
Q707	8-729-900-89	TRANSISTOR DTC144ES	
Q708	8-729-209-15	TRANSISTOR 2SD2012	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R102	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R103	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, UK, EE, CIS)
R104	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R105	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R106	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R107	1-249-416-11	CARBON 820 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R108	1-249-413-11	CARBON 470 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R109	1-249-409-11	CARBON 220 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R110	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, UK, EE, CIS)
R111	1-249-425-11	CARBON 4.7K 5% 1/4W	(EXCEPT AEP, UK, G, IT, EE, CIS)
R112	1-249-416-11	CARBON 820 5% 1/4W	(EXCEPT AEP, UK, G, IT, EE, CIS)
R126	1-249-417-11	CARBON 1K 5% 1/4W	
R127	1-249-433-11	CARBON 22K 5% 1/4W	
R128	1-249-441-11	CARBON 100K 5% 1/4W	
R129	1-249-441-11	CARBON 100K 5% 1/4W	
R130	1-249-417-11	CARBON 1K 5% 1/4W	
R131	1-249-433-11	CARBON 22K 5% 1/4W	
R134	1-249-421-11	CARBON 2.2K 5% 1/4W	
R135	1-249-441-11	CARBON 100K 5% 1/4W	
R136	1-249-417-11	CARBON 1K 5% 1/4W	
R137	1-249-437-11	CARBON 47K 5% 1/4W	
R138	1-249-429-11	CARBON 10K 5% 1/4W	
R139	1-249-429-11	CARBON 10K 5% 1/4W	
R142	1-249-417-11	CARBON 1K 5% 1/4W	
R146	1-249-425-11	CARBON 4.7K 5% 1/4W	
R147	1-260-096-11	CARBON 560 5% 1/2W	
R148	1-260-096-11	CARBON 560 5% 1/2W	
R151	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R152	1-249-417-11	CARBON 1K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R153	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, UK, EE, CIS)
R154	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R155	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R156	1-247-897-11	CARBON 560K 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R157	1-249-416-11	CARBON 820 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R158	1-249-413-11	CARBON 470 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R159	1-249-409-11	CARBON 220 5% 1/4W	(AEP, UK, G, IT, EE, CIS)
R160	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, UK, EE, CIS)
R161	1-249-425-11	CARBON 4.7K 5% 1/4W	(EXCEPT AEP, UK, G, IT, EE, CIS)
R162	1-249-416-11	CARBON 820 5% 1/4W	(EXCEPT AEP, UK, G, IT, EE, CIS)
R174	1-249-431-11	CARBON 15K 5% 1/4W	
R175	1-249-431-11	CARBON 15K 5% 1/4W	
R176	1-247-874-11	CARBON 62K 5% 1/4W	
R177	1-247-862-11	CARBON 20K 5% 1/4W	
R178	1-247-874-11	CARBON 62K 5% 1/4W	
R179	1-247-862-11	CARBON 20K 5% 1/4W	
R180	1-247-862-11	CARBON 20K 5% 1/4W	
R181	1-247-862-11	CARBON 20K 5% 1/4W	
R184	1-249-421-11	CARBON 2.2K 5% 1/4W	
R185	1-249-433-11	CARBON 22K 5% 1/4W	
R186	1-249-441-11	CARBON 100K 5% 1/4W	
R187	1-249-441-11	CARBON 100K 5% 1/4W	
R189	1-249-417-11	CARBON 1K 5% 1/4W	
R190	1-249-417-11	CARBON 1K 5% 1/4W	
R192	1-249-417-11	CARBON 1K 5% 1/4W	
R206	1-249-412-11	CARBON 390 5% 1/4W	
R207	1-249-412-11	CARBON 390 5% 1/4W	
R208	1-249-412-11	CARBON 390 5% 1/4W	
R209	1-249-412-11	CARBON 390 5% 1/4W	
R210	1-249-412-11	CARBON 390 5% 1/4W	
R211	1-249-412-11	CARBON 390 5% 1/4W	

MAIN POLAR

Ref. No.	Part No.	Description				Remark
R212	1-249-423-11	CARBON	3.3K	5%	1/4W	
R213	1-249-423-11	CARBON	3.3K	5%	1/4W	
R214	1-249-420-11	CARBON	1.8K	5%	1/4W	
R215	1-249-420-11	CARBON	1.8K	5%	1/4W	
R216	1-249-417-11	CARBON	1K	5%	1/4W	
R217	1-249-417-11	CARBON	1K	5%	1/4W	
R218	1-249-440-11	CARBON	82K	5%	1/4W	
R219	1-249-440-11	CARBON	82K	5%	1/4W	
R220	1-249-440-11	CARBON	82K	5%	1/4W	
R221	1-249-440-11	CARBON	82K	5%	1/4W	
R222	1-249-437-11	CARBON	47K	5%	1/4W	
R223	1-249-437-11	CARBON	47K	5%	1/4W	
R224	1-249-427-11	CARBON	6.8K	5%	1/4W	
R225	1-249-427-11	CARBON	6.8K	5%	1/4W	
R226	1-249-427-11	CARBON	6.8K	5%	1/4W	
R227	1-249-427-11	CARBON	6.8K	5%	1/4W	
R228	1-249-427-11	CARBON	6.8K	5%	1/4W	
R229	1-249-427-11	CARBON	6.8K	5%	1/4W	
R231	1-249-433-11	CARBON	22K	5%	1/4W	(CIS)
R253	1-249-425-11	CARBON	4.7K	5%	1/4W	
R255	1-249-425-11	CARBON	4.7K	5%	1/4W	
R401	1-249-417-11	CARBON	1K	5%	1/4W	
R402	1-249-417-11	CARBON	1K	5%	1/4W	
R403	1-249-429-11	CARBON	10K	5%	1/4W	
R404	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-431-11	CARBON	15K	5%	1/4W	
R704	1-249-423-11	CARBON	3.3K	5%	1/4W	
R705	1-249-414-11	CARBON	560	5%	1/4W	(US, CND, MX)
R705	1-249-409-11	CARBON	220	5%	1/4W	(EXCEPT US, CND, MX)
R706	1-249-414-11	CARBON	560	5%	1/4W	(US, CND, MX)
R706	1-249-409-11	CARBON	220	5%	1/4W	(EXCEPT US, CND, MX)
R707	1-249-409-11	CARBON	220	5%	1/4W	
R708	1-249-431-11	CARBON	15K	5%	1/4W	
R709	1-249-429-11	CARBON	10K	5%	1/4W	
R710	1-249-409-11	CARBON	220	5%	1/4W	
R711	1-249-429-11	CARBON	10K	5%	1/4W	
R714	1-249-429-11	CARBON	10K	5%	1/4W	
R715	1-249-441-11	CARBON	100K	5%	1/4W	
R717	1-249-415-11	CARBON	680	5%	1/4W	(EXCEPT EE, CIS)
R717	1-249-413-11	CARBON	470	5%	1/4W	(EE, CIS)
R718	1-249-425-11	CARBON	4.7K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R719	1-249-415-11	CARBON	680	5%	1/4W	(EXCEPT EE, CIS)
R719	1-249-413-11	CARBON	470	5%	1/4W	(EE, CIS)

< TERMINAL >

TM101	1-537-238-21	TERMINAL BOARD (ANTENNA)	(EXCEPT AEP, UK, G, IT, EE, CIS)
TM101	1-537-488-11	TERMINAL BOARD (ANTENNA)	(AEP, UK, G, IT, EE, CIS)

< TEST POINT >

* TP401	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P

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* A-4371-478-A POLAR BOARD, COMPLETE (CIS)

****

< CAPACITOR >

C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1702	1-130-014-00	FILM	470PF	5%	50V
C1703	1-124-902-00	ELECT	0.47uF	20%	50V
C1704	1-124-902-00	ELECT	0.47uF	20%	50V
C1705	1-164-098-11	CERAMIC	0.047uF		12V
C1706	1-124-903-11	ELECT	1uF	20%	50V
C1707	1-162-288-31	CERAMIC	330PF	10%	50V
C1708	1-124-903-11	ELECT	1uF	20%	50V
C1709	1-124-903-11	ELECT	1uF	20%	50V
C1710	1-137-364-11	FILM	0.001uF	5%	50V
C1711	1-137-364-11	FILM	0.001uF	5%	50V
C1712	1-130-736-11	FILM	0.01uF	5%	50V
C1713	1-130-736-11	FILM	0.01uF	5%	50V
C1714	1-124-903-11	ELECT	1uF	20%	50V
C1715	1-124-903-11	ELECT	1uF	20%	50V
C1716	1-124-903-11	ELECT	1uF	20%	50V
C1717	1-162-291-31	CERAMIC	560PF	10%	50V
C1718	1-162-291-31	CERAMIC	560PF	10%	50V
C1719	1-124-477-11	ELECT	47uF	20%	25V
C1720	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1721	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1722	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1723	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1724	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1725	1-124-477-11	ELECT	47uF	20%	25V
C1726	1-124-903-11	ELECT	1uF	20%	50V
C1727	1-124-903-11	ELECT	1uF	20%	50V
C1728	1-104-792-51	ELECT	33uF	20%	16V
C1729	1-124-477-11	ELECT	47uF	20%	25V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN1701	1-568-832-11	SOCKET, CONNECTOR 13P	
		< TRIMMER >	
CT1701	1-141-260-00	CAP, TRIMMER 50PF	
		< DIODE >	
D1701	8-719-987-63	DIODE 1N4148M	
D1702	8-719-987-63	DIODE 1N4148M	
D1703	8-719-987-63	DIODE 1N4148M	
D1704	8-719-987-63	DIODE 1N4148M	
D1705	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC1701	8-759-063-04	IC IR3R42	
IC1702	8-759-634-51	IC M5218AP	
IC1703	8-759-140-53	IC UPD4053BC	
		< COIL >	
L1701	1-409-497-11	COIL (FILTER)	
		< TRANSISTOR >	
Q1701	8-729-900-61	TRANSISTOR DTA114ES	
Q1702	8-729-900-80	TRANSISTOR DTC114ES	
Q1703	8-729-900-80	TRANSISTOR DTC114ES	
Q1704	8-729-900-80	TRANSISTOR DTC114ES	
Q1705	8-729-900-61	TRANSISTOR DTA114ES	
		< RESISTOR >	
R1701	1-249-433-11	CARBON 22K 5% 1/4W	
R1702	1-249-435-11	CARBON 33K 5% 1/4W	
R1703	1-249-427-11	CARBON 6.8K 5% 1/4W	
R1704	1-247-858-11	CARBON 13K 5% 1/4W	
R1705	1-249-417-11	CARBON 1K 5% 1/4W	
R1706	1-249-417-11	CARBON 1K 5% 1/4W	
R1707	1-249-441-11	CARBON 100K 5% 1/4W	
R1708	1-249-440-11	CARBON 82K 5% 1/4W	
R1709	1-249-439-11	CARBON 68K 5% 1/4W	
R1710	1-249-439-11	CARBON 68K 5% 1/4W	
R1711	1-249-439-11	CARBON 68K 5% 1/4W	
R1712	1-247-878-00	CARBON 91K 5% 1/4W	
R1713	1-247-878-00	CARBON 91K 5% 1/4W	
R1714	1-249-441-11	CARBON 100K 5% 1/4W	
R1715	1-249-441-11	CARBON 100K 5% 1/4W	
R1716	1-249-441-11	CARBON 100K 5% 1/4W	
R1717	1-249-441-11	CARBON 100K 5% 1/4W	
R1718	1-249-429-11	CARBON 10K 5% 1/4W	
R1719	1-249-429-11	CARBON 10K 5% 1/4W	
R1720	1-249-429-11	CARBON 10K 5% 1/4W	
R1721	1-249-434-11	CARBON 27K 5% 1/4W	
R1722	1-249-441-11	CARBON 100K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV1701	1-238-600-11	RES, ADJ, CARBON 10K	
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K	
		< TEST PIN >	
* TP1701	1-560-061-00	PIN, CONNECTOR 3P	
* TP1702	1-560-061-00	PIN, CONNECTOR 3P	
***			
*	A-4369-822-A	POWER BOARD, COMPLETE (US, CND)	
*	A-4369-826-A	POWER BOARD, COMPLETE (E, AUS, EA, MX, MY, SP, PX, AEP, UK)	
*	A-4371-819-A	POWER BOARD, COMPLETE (G, IT)	
*	A-4377-043-A	POWER BOARD, COMPLETE (EE, CIS)	
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*	4-942-204-01	PLATE, GROUND	
		< CAPACITOR >	
C901	1-124-903-11	ELECT 1uF 20% 50V	
C902	1-162-282-31	CERAMIC 100PF 10% 50V	
C903	1-162-282-31	CERAMIC 100PF 10% 50V	
C904	1-124-910-11	ELECT 47uF 20% 50V	
C905	1-124-910-11	ELECT 47uF 20% 50V	
C906	1-124-910-11	ELECT 47uF 20% 50V	
C907	1-124-910-11	ELECT 47uF 20% 50V	
C908	1-124-910-11	ELECT 47uF 20% 50V	
C909	1-124-910-11	ELECT 47uF 20% 50V	
C910	1-136-165-00	FILM 0.1uF 5% 50V	
C911	1-136-165-00	FILM 0.1uF 5% 50V	
C912	1-124-907-11	ELECT 10uF 20% 50V	
C913	1-124-902-00	ELECT 0.47uF 20% 50V	
C914	1-124-910-11	ELECT 47uF 20% 50V	
C916	1-126-176-11	ELECT 220uF 20% 10V	
C920	1-124-564-11	ELECT 4700uF 20% 25V	
C921	1-124-564-11	ELECT 4700uF 20% 25V	
C922	1-136-165-00	FILM 0.1uF 5% 50V	
C923	1-136-165-00	FILM 0.1uF 5% 50V	
C927	1-126-974-11	ELECT 3300uF 20% 50V	
C928	1-126-974-11	ELECT 3300uF 20% 50V	
C929	1-124-907-11	ELECT 10uF 20% 50V	
C930	1-124-929-11	ELECT 22uF 20% 100V	
C931	1-124-916-11	ELECT 22uF 20% 63V	
C932	1-136-165-00	FILM 0.1uF 5% 50V	
C933	1-136-165-00	FILM 0.1uF 5% 50V	

POWER

Ref. No.	Part No.	Description				Remark
C934	1-136-163-00	FILM	0.068uF	5%	50V	(G, IT)
C935	1-124-910-11	ELECT	47uF	20%	50V	
C951	1-124-903-11	ELECT	1uF	20%	50V	
C952	1-162-282-31	CERAMIC	100PF	10%	50V	
C953	1-162-282-31	CERAMIC	100PF	10%	50V	
C954	1-124-910-11	ELECT	47uF	20%	50V	
C955	1-124-910-11	ELECT	47uF	20%	50V	
C960	1-136-165-00	FILM	0.1uF	5%	50V	
C961	1-136-165-00	FILM	0.1uF	5%	50V	
C981	1-136-163-00	FILM	0.068uF	5%	50V	(G, IT)

< CONNECTOR >

* CN905	1-766-528-11	CONNECTOR, BOARD TO BOARD 8P
* CN906	1-766-530-11	CONNECTOR, BOARD TO BOARD 17P

< DIODE >

D901	8-719-312-09	DIODE	RBA-402	
D902	8-719-987-63	DIODE	1N4148M	
D903	8-719-200-82	DIODE	11ES2	
D904	8-719-200-82	DIODE	11ES2	
D905	8-719-934-22	DIODE	HZS30-2L	
D906	8-719-014-66	DIODE	UZP-5.6B	
D907	8-719-987-63	DIODE	1N4148M	
D911	8-719-200-82	DIODE	11ES2	(EXCEPT EE, CIS)
D911	8-719-210-21	DIODE	11EQS04	(EE, CIS)
D912	8-719-200-82	DIODE	11ES2	(EXCEPT EE, CIS)
D912	8-719-210-21	DIODE	11EQS04	(EE, CIS)
D913	8-719-200-82	DIODE	11ES2	(EXCEPT EE, CIS)
D913	8-719-210-21	DIODE	11EQS04	(EE, CIS)
D914	8-719-200-82	DIODE	11ES2	(EXCEPT EE, CIS)
D914	8-719-210-21	DIODE	11EQS04	(EE, CIS)
D921	8-719-987-63	DIODE	1N4148M	
D922	8-719-987-63	DIODE	1N4148M	
D945	8-719-987-63	DIODE	1N4148M	
D946	8-719-987-63	DIODE	1N4148M	

< IC >

⚠IC901	8-749-900-96	IC	STK-4142MK2	(US, CND)
⚠IC901	8-749-941-52	IC	STK-4152II	(EXCEPT US, CND)
IC902	8-759-111-68	IC	UPC1237HA	

< COIL >

L901	1-420-872-00	COIL, AIR-CORE	(G, IT)
L902	1-420-872-00	COIL, AIR-CORE	(G, IT)

Ref. No.	Part No.	Description				Remark

< TRANSISTOR >

Q901	8-729-030-19	TRANSISTOR	2SB1640(TP)
Q945	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q950	8-729-900-63	TRANSISTOR	DTA124ES
Q959	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA

< RESISTOR >

R901	1-249-417-11	CARBON	1K	5%	1/4W	
R902	1-249-438-11	CARBON	56K	5%	1/4W	
R903	1-249-418-11	CARBON	1.2K	5%	1/4W	
R904	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R905	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R906	1-249-421-11	CARBON	2.2K	5%	1/4W	
R907	1-249-421-11	CARBON	2.2K	5%	1/4W	
⚠R908	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R909	1-260-099-11	CARBON	1K	5%	1/2W	
⚠R910	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R911	1-260-099-11	CARBON	1K	5%	1/2W	
R912	1-249-417-11	CARBON	1K	5%	1/4W	
R913	1-249-431-11	CARBON	15K	5%	1/4W	
R914	1-249-441-11	CARBON	100K	5%	1/4W	
R915	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R916	1-217-151-00	RES, METAL PLATE	0.22		2W	
R917	1-260-076-11	CARBON	10	5%	1/2W	
R918	1-249-433-11	CARBON	22K	5%	1/4W	
R919	1-249-441-11	CARBON	100K	5%	1/4W	
R920	1-249-439-11	CARBON	68K	5%	1/4W	
R921	1-249-422-11	CARBON	2.7K	5%	1/4W	
R922	1-249-425-11	CARBON	4.7K	5%	1/4W	
R923	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R924	1-215-890-11	METAL OXIDE	470	5%	2W	F
R941	1-249-399-11	CARBON	33	5%	1/4W	(G, IT)
R942	1-249-429-11	CARBON	10K	5%	1/4W	
R943	1-249-426-11	CARBON	5.6K	5%	1/4W	
⚠R944	1-212-897-00	FUSIBLE	470	5%	1/4W	F
R945	1-260-072-11	CARBON	4.7	5%	1/2W	(G, IT)
R946	1-249-399-11	CARBON	33	5%	1/4W	(G, IT)
R947	1-260-072-11	CARBON	4.7	5%	1/2W	(G, IT)
R951	1-249-417-11	CARBON	1K	5%	1/4W	
R952	1-249-438-11	CARBON	56K	5%	1/4W	
R953	1-249-418-11	CARBON	1.2K	5%	1/4W	
R954	1-249-438-11	CARBON	56K	5%	1/4W	
R956	1-249-421-11	CARBON	2.2K	5%	1/4W	
R957	1-249-421-11	CARBON	2.2K	5%	1/4W	
R962	1-249-417-11	CARBON	1K	5%	1/4W	
R963	1-249-431-11	CARBON	15K	5%	1/4W	
R964	1-249-441-11	CARBON	100K	5%	1/4W	
R965	1-249-437-11	CARBON	47K	5%	1/4W	

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Ref. No.	Part No.	Description			Remark
⚠R966	1-217-151-00	RES, METAL PLATE	0.22		2W
R967	1-260-076-11	CARBON	10	5%	1/2W
R991	1-249-399-11	CARBON	33	5%	1/4W (G, IT)
R992	1-249-399-11	CARBON	33	5%	1/4W (G, IT)
⚠R999	1-212-881-11	FUSIBLE	100	5%	1/4W F
		< RELAY >			
RY901	1-515-920-11	RELAY (24V)(MUTING)			
		< TERMINAL >			
TM901	1-537-240-11	TERMINAL BOARD (SPEAKER)			

****

Ref. No.	Part No.	Description			Remark
*	A-4357-889-A	TC BOARD, COMPLETE ******************			
*	4-886-555-00	HEAT SINK			
	7-685-646-81	SCREW +BVTP	3X8		TYPE2
		< CAPACITOR >			
C201	1-124-443-00	ELECT	100uF	20%	10V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-124-907-11	ELECT	10uF	20%	50V
C204	1-124-902-00	ELECT	0.47uF	20%	50V
C205	1-164-159-11	CERAMIC	0.1uF		50V
C206	1-126-103-11	ELECT	470uF	20%	16V
C207	1-164-159-11	CERAMIC	0.1uF		50V
C316	1-124-443-00	ELECT	100uF	20%	10V
C317	1-124-443-00	ELECT	100uF	20%	10V
C318	1-124-903-11	ELECT	1uF	20%	50V
C321	1-124-907-11	ELECT	10uF	20%	50V
C322	1-106-359-00	MYLAR	4700PF	5%	200V
C323	1-162-290-31	CERAMIC	470PF	10%	50V
C324	1-124-907-11	ELECT	10uF	20%	50V
C325	1-136-165-00	FILM	0.1uF	5%	50V
C326	1-124-903-11	ELECT	1uF	20%	50V
C327	1-124-902-00	ELECT	0.47uF	20%	50V
C328	1-124-903-11	ELECT	1uF	20%	50V
C329	1-124-907-11	ELECT	10uF	20%	50V
C330	1-124-443-00	ELECT	100uF	20%	10V
C371	1-164-159-11	CERAMIC	0.1uF		50V
C385	1-164-159-11	CERAMIC	0.1uF		50V
C386	1-164-159-11	CERAMIC	0.1uF		50V
C387	1-164-159-11	CERAMIC	0.1uF		50V
C388	1-164-159-11	CERAMIC	0.1uF		50V
C390	1-124-122-11	ELECT	100uF	20%	50V
C421	1-124-907-11	ELECT	10uF	20%	50V
C422	1-106-359-00	MYLAR	4700PF	5%	200V
C423	1-162-290-31	CERAMIC	470PF	10%	50V

Ref. No.	Part No.	Description			Remark
C424	1-124-907-11	ELECT	10uF	20%	50V
C425	1-136-165-00	FILM	0.1uF	5%	50V
C426	1-124-903-11	ELECT	1uF	20%	50V
C427	1-124-902-00	ELECT	0.47uF	20%	50V
C428	1-124-903-11	ELECT	1uF	20%	50V
C429	1-124-907-11	ELECT	10uF	20%	50V
C430	1-124-443-00	ELECT	100uF	20%	10V
C701	1-124-910-11	ELECT	47uF	20%	50V
C702	1-124-477-11	ELECT	47uF	20%	25V
C703	1-124-477-11	ELECT	47uF	20%	25V
		< CONNECTOR >			
CN201	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P			
CN202	1-695-334-11	PIN, CONNECTOR (PC BOARD) 11P			
CN203	1-695-344-11	PIN, CONNECTOR (PC BOARD) 21P			
CN204	1-766-527-11	SOCKET, CONNECTOR 17P			
		< DIODE >			
D201	8-719-200-82	DIODE	11ES2		
D202	8-719-987-63	DIODE	1N4148M		
D203	8-719-987-63	DIODE	1N4148M		
D204	8-719-987-63	DIODE	1N4148M		
D205	8-719-000-60	DIODE	UZL-6M2		
D301	8-719-000-60	DIODE	UZL-6M2		
D701	8-719-001-70	DIODE	UZL-12M1		
		< IC >			
IC201	8-759-283-58	IC	M38122M2-067FP		
IC202	8-759-520-90	IC	PST572E		
IC203	8-759-822-09	IC	LB1641		
IC321	8-759-098-73	IC	HA12172NT		
		< TRANSISTOR >			
Q201	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q202	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q203	8-729-900-80	TRANSISTOR	DTC114ES		
Q204	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q205	8-729-900-80	TRANSISTOR	DTC114ES		
Q207	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q227	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q228	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q229	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q230	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q231	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q233	8-729-900-65	TRANSISTOR	DTA144ES		
Q234	8-729-902-80	TRANSISTOR	DTA114YS		
Q235	8-729-902-80	TRANSISTOR	DTA114YS		
Q421	8-729-620-05	TRANSISTOR	2SC2603-EF		

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TC

Ref. No.	Part No.	Description	Remark
Q422	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q624	8-729-801-93	TRANSISTOR 2SD1387	
Q625	8-729-900-80	TRANSISTOR DTC114ES	
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-429-11	CARBON 10K 5% 1/4W	
R203	1-249-429-11	CARBON 10K 5% 1/4W	
R204	1-249-429-11	CARBON 10K 5% 1/4W	
R205	1-247-887-00	CARBON 220K 5% 1/4W	
R206	1-247-887-00	CARBON 220K 5% 1/4W	
R207	1-249-429-11	CARBON 10K 5% 1/4W	
R208	1-249-429-11	CARBON 10K 5% 1/4W	
R209	1-249-429-11	CARBON 10K 5% 1/4W	
R210	1-249-425-11	CARBON 4.7K 5% 1/4W	
R211	1-249-429-11	CARBON 10K 5% 1/4W	
R212	1-247-903-00	CARBON 1M 5% 1/4W	
R213	1-249-429-11	CARBON 10K 5% 1/4W	
R214	1-249-429-11	CARBON 10K 5% 1/4W	
R215	1-249-417-11	CARBON 1K 5% 1/4W	
R216	1-249-417-11	CARBON 1K 5% 1/4W	
R217	1-249-417-11	CARBON 1K 5% 1/4W	
R218	1-249-417-11	CARBON 1K 5% 1/4W	
R219	1-249-417-11	CARBON 1K 5% 1/4W	
R220	1-249-411-11	CARBON 330 5% 1/4W	
R221	1-249-411-11	CARBON 330 5% 1/4W	
R222	1-249-411-11	CARBON 330 5% 1/4W	
R223	1-247-856-00	CARBON 11K 5% 1/4W	
R224	1-249-432-11	CARBON 18K 5% 1/4W	
R225	1-249-414-11	CARBON 560 5% 1/4W	
R226	1-249-421-11	CARBON 2.2K 5% 1/4W	
R227	1-247-807-31	CARBON 100 5% 1/4W	
R228	1-247-807-31	CARBON 100 5% 1/4W	
R229	1-247-807-31	CARBON 100 5% 1/4W	
R230	1-247-807-31	CARBON 100 5% 1/4W	
R231	1-247-807-31	CARBON 100 5% 1/4W	
R232	1-247-807-31	CARBON 100 5% 1/4W	
R233	1-249-437-11	CARBON 47K 5% 1/4W	
R234	1-249-437-11	CARBON 47K 5% 1/4W	
R235	1-249-436-11	CARBON 39K 5% 1/4W	
R236	1-249-436-11	CARBON 39K 5% 1/4W	
R237	1-249-417-11	CARBON 1K 5% 1/4W	
R238	1-249-425-11	CARBON 4.7K 5% 1/4W	
R239	1-249-425-11	CARBON 4.7K 5% 1/4W	
R240	1-249-425-11	CARBON 4.7K 5% 1/4W	
R241	1-249-429-11	CARBON 10K 5% 1/4W	
R243	1-247-807-31	CARBON 100 5% 1/4W	
R244	1-247-807-31	CARBON 100 5% 1/4W	
R245	1-247-807-31	CARBON 100 5% 1/4W	
R246	1-247-807-31	CARBON 100 5% 1/4W	
R247	1-247-811-31	CARBON 150 5% 1/4W	
R248	1-247-811-31	CARBON 150 5% 1/4W	
R249	1-247-811-31	CARBON 150 5% 1/4W	
R250	1-249-409-11	CARBON 220 5% 1/4W	
R251	1-249-409-11	CARBON 220 5% 1/4W	
R321	1-249-430-11	CARBON 12K 5% 1/4W	
R322	1-249-431-11	CARBON 15K 5% 1/4W	
R323	1-249-428-11	CARBON 8.2K 5% 1/4W	
R324	1-247-840-00	CARBON 2.4K 5% 1/4W	
R325	1-249-433-11	CARBON 22K 5% 1/4W	
R326	1-249-432-11	CARBON 18K 5% 1/4W	
R327	1-249-425-11	CARBON 4.7K 5% 1/4W	
R328	1-249-421-11	CARBON 2.2K 5% 1/4W	
R334	1-249-421-11	CARBON 2.2K 5% 1/4W	
R335	1-249-421-11	CARBON 2.2K 5% 1/4W	
R371	1-215-451-00	METAL 18K 1% 1/6W	
R372	1-249-429-11	CARBON 10K 5% 1/4W	
R373	1-249-429-11	CARBON 10K 5% 1/4W	
R374	1-249-429-11	CARBON 10K 5% 1/4W	
R375	1-249-429-11	CARBON 10K 5% 1/4W	
R376	1-249-429-11	CARBON 10K 5% 1/4W	
R377	1-249-429-11	CARBON 10K 5% 1/4W	
R378	1-249-425-11	CARBON 4.7K 5% 1/4W	
R379	1-249-429-11	CARBON 10K 5% 1/4W	
R380	1-249-417-11	CARBON 1K 5% 1/4W	
R381	1-247-864-11	CARBON 24K 5% 1/4W	
R382	1-249-434-11	CARBON 27K 5% 1/4W	
R383	1-249-441-11	CARBON 100K 5% 1/4W	
R384	1-249-429-11	CARBON 10K 5% 1/4W	
R421	1-249-430-11	CARBON 12K 5% 1/4W	
R422	1-249-431-11	CARBON 15K 5% 1/4W	
R423	1-249-428-11	CARBON 8.2K 5% 1/4W	
R424	1-247-840-00	CARBON 2.4K 5% 1/4W	
R425	1-249-433-11	CARBON 22K 5% 1/4W	
R426	1-249-432-11	CARBON 18K 5% 1/4W	
R427	1-249-425-11	CARBON 4.7K 5% 1/4W	
R428	1-249-421-11	CARBON 2.2K 5% 1/4W	
R626	1-249-429-11	CARBON 10K 5% 1/4W	
R701	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV341	1-241-785-11	RES, ADJ, CARBON 10K	
RV441	1-241-785-11	RES, ADJ, CARBON 10K	

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
**			
*	1-652-284-14	TC FUTA BOARD *************	
		< CONNECTOR >	
CN9970	1-580-482-11	SOCKET, CONNECTOR 7P	
		< DIODE >	
D9070	8-719-301-43	LED SEL2410E-C-TP6 (▷)	
D9080	8-719-301-43	LED SEL2410E-C-TP6 (▷)	
D9090	8-719-301-43	LED SEL2410E-C-TP6 (◁)	
D9100	8-719-301-43	LED SEL2410E-C-TP6 (◁)	
		< RESISTOR >	
R9010	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9020	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9030	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9150	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9160	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9210	1-216-025-00	METAL CHIP 100 5% 1/10W	
R9220	1-216-025-00	METAL CHIP 100 5% 1/10W	
		< SWITCH >	
S9010	1-554-303-21	SWITCH, TACTILE (■)	
S9020	1-554-303-21	SWITCH, TACTILE (▷)	
S9030	1-554-303-21	SWITCH, TACTILE (◁)	
S9040	1-554-303-21	SWITCH, TACTILE (◀◀)	
S9050	1-554-303-21	SWITCH, TACTILE (▶▶)	
**			
*	A-4371-702-A	TC SW BOARD ***********	
		< CONNECTOR >	
CN9980	1-580-482-11	SOCKET, CONNECTOR 7P	
CN9990	1-766-319-11	HOUSING, CONNECTOR 17P	
		< DIODE >	
D9010	8-719-032-87	LED SEL5420S-TP (▷)	
D9020	8-719-032-87	LED SEL5420S-TP (◁)	
D9030	8-719-033-06	LED SEL5920A (❚❚ PAUSE)	
D9040	8-719-032-83	LED SEL5220S-TP (● REC)	
D9050	8-719-311-05	LED SEL3213C-D (HIGT SPEED DUBBING)	
D9060	8-719-311-05	LED SEL3213C-D (CD SYNCRO)	
		< RESISTOR >	
R9040	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9050	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9060	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R9070	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9080	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9090	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9100	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R9110	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R9120	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R9130	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R9140	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
		< SWITCH >	
S9060	1-554-303-21	SWITCH, TACTILE (● REC)	
S9070	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S9080	1-554-303-21	SWITCH, TACTILE (HIGH SPEED DUBBING)	
S9090	1-554-303-21	SWITCH, TACTILE (■)	
S9100	1-554-303-21	SWITCH, TACTILE (▷)	
S9110	1-554-303-21	SWITCH, TACTILE (◁)	
S9120	1-554-303-21	SWITCH, TACTILE (CD SYNCRO)	
S9130	1-554-303-21	SWITCH, TACTILE (◀◀)	
S9140	1-554-303-21	SWITCH, TACTILE (▶▶)	
S9150	1-692-503-11	SWITCH, SLIDE (DIRECTION)	
S9160	1-692-356-11	SWITCH, SLIDE (DOLBY NR)	
**			
*	1-653-104-11	TRANSFORMER BOARD *****************	
	1-533-293-11	FUSE HOLDER	
		< CONNECTOR >	
CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN902	1-569-508-11	PIN, CONNECTOR 8P	
		< FUSE >	
⚠F901	1-576-103-11	FUSE (1.6A/250V)	(US, CND)
⚠F901	1-532-284-00	FUSE, TIME-LAG (T0.63AL/250V)	(AEP, UK, G, IT, EE, CIS)
⚠F901	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(E, EA, MX, MY, SP, PX)
⚠F901	1-532-215-00	FUSE, TIME-LAG (T0.8AL/250V)	(AUS)
⚠F902	1-532-284-00	FUSE, TIME-LAG (T0.63AL/250V)	(E, EA, MX, MY, SP, PX)

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TRANSFORMER | TRANSFORMER RELAY | VOLUME

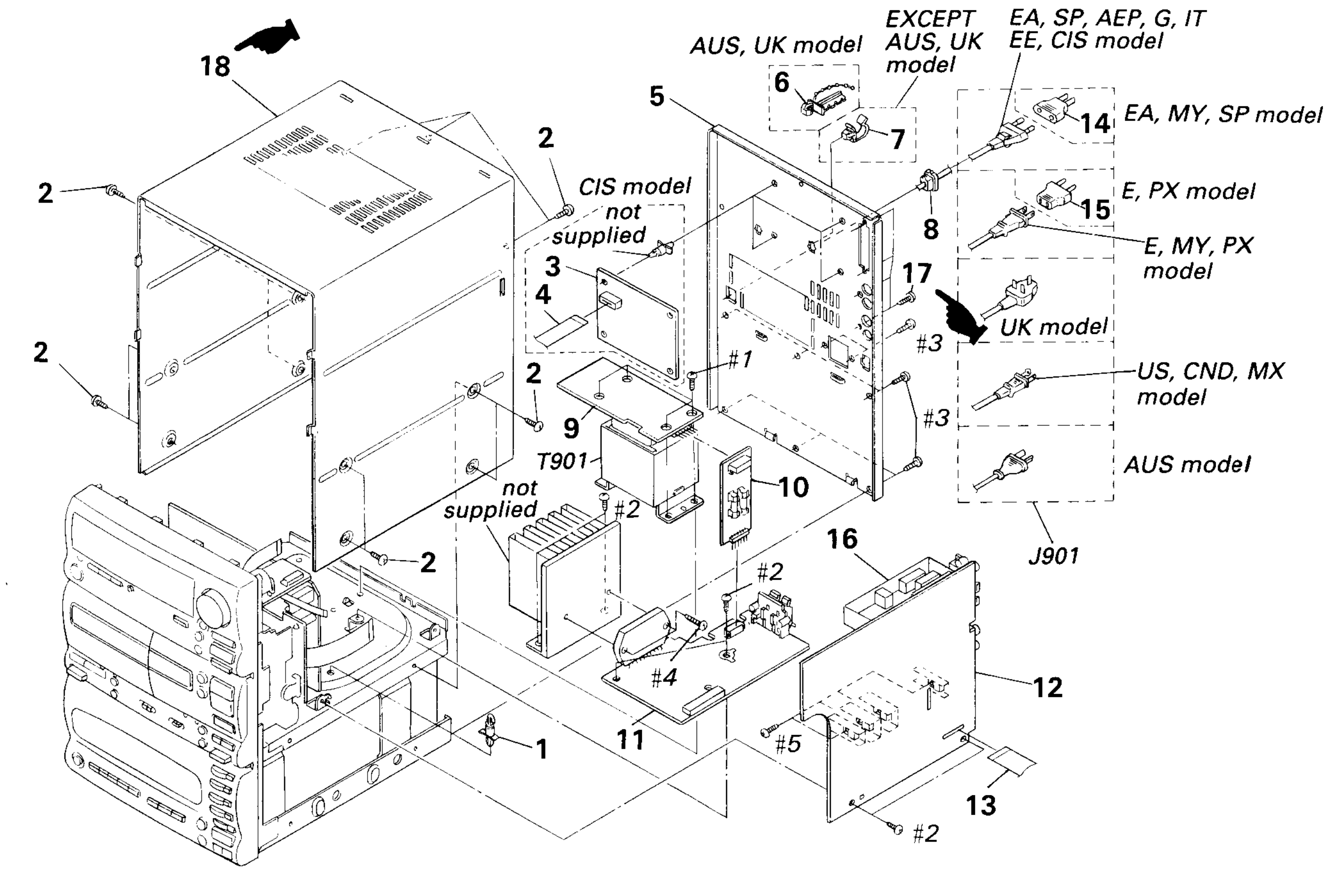
Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
⚠R900	1-202-725-00	SOLID 3.3M 10% 1/2W	(US, CND)
		< SWITCH >	
⚠S901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)	(E, EA, MX, MY, SP, PX)
**			
*	1-653-106-11	TRANSFORMER RELAY BOARD ***********************	
	1-533-293-11	FUSE HOLDER	
		< CONNECTOR >	
* CN903	1-562-573-11	SOCKET, CONNECTOR 8P	
* CN904	1-569-508-11	PIN, CONNECTOR 8P	
		< FUSE >	
⚠F911	1-576-103-11	FUSE (1.6A/250V)	(US, CND)
⚠F911	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(AEP, UK, G, IT, EE, MX, MY, SP, CIS)
⚠F911	1-532-259-00	FUSE, TIME-LAG (T1.6AL/250V)	(E, AUS, EA, PX)
⚠F912	1-576-103-11	FUSE (1.6A/250V)	(US, CND)
⚠F912	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(AEP, UK, G, IT, EE, CIS)
⚠F912	1-532-285-00	FUSE, TIME-LAG (T1.25AL/250V)	(MX, SP, MY)
⚠F912	1-532-259-00	FUSE, TIME-LAG (T1.6AL/250V)	(E, AUS, EA, PX)
**			
*	1-653-105-11	VOLUME BOARD ************	
		< CAPACITOR >	
C188	1-164-159-11	CERAMIC 0.1uF 50V	
C301	1-124-477-11	ELECT 47uF 20% 25V	
		< CONNECTOR >	
CN801	1-569-502-11	PIN, CONNECTOR (PC BOARD) 7P	
CN802	1-564-506-11	PLUG, CONNECTOR 3P	
		< DIODE >	
D301	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC301	8-759-820-62	IC LB1639	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R301	1-249-425-11	CARBON 4.7K 5% 1/4W	
R302	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV301	1-223-674-11	RES, VAR, CARBON 100K/100K (VOLUME)	
**			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3. CORRECTION

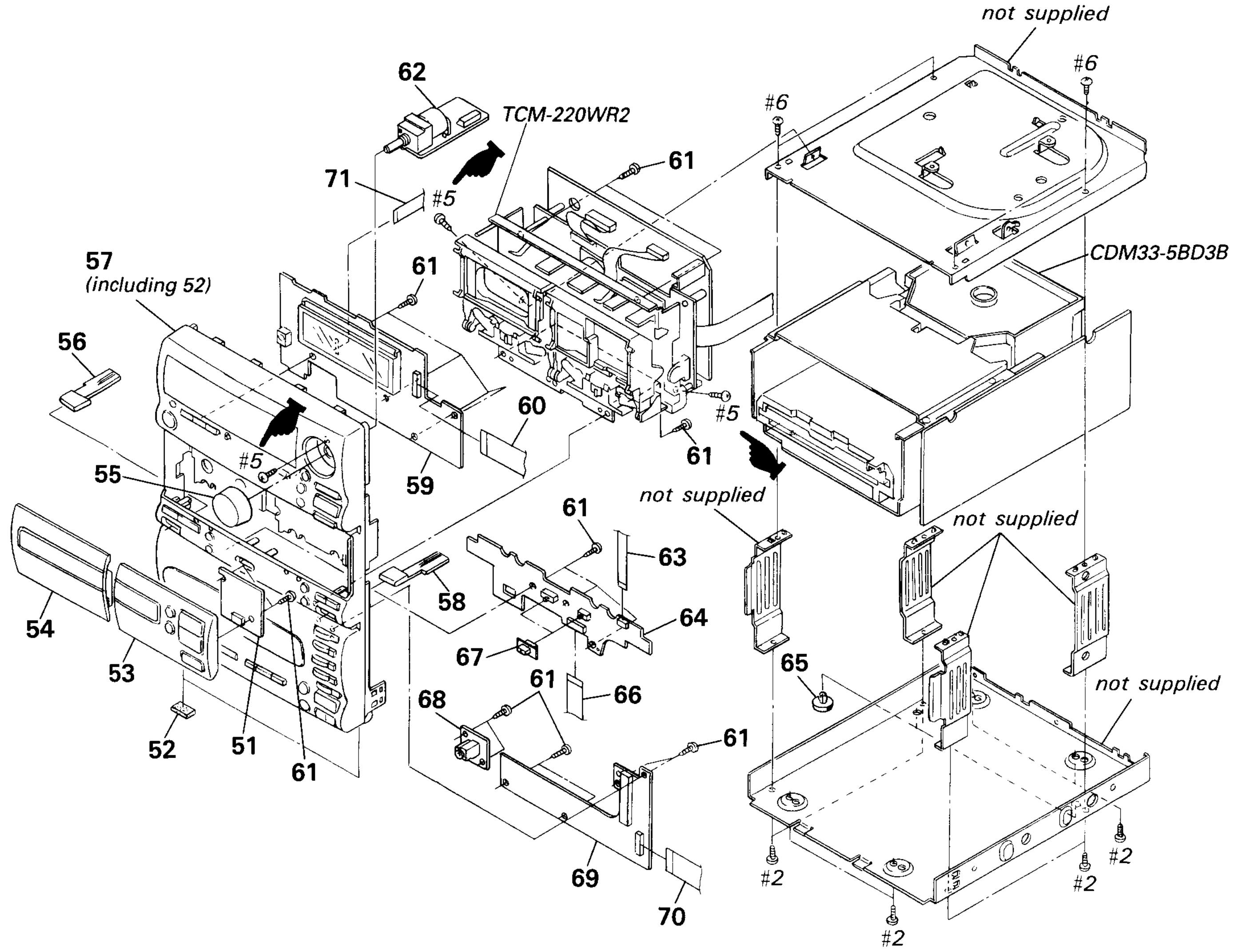
CABINET SECTION (Page 77 in original service manual)


EXCEPT AUS, UK model
EA, SP, AEP, G, IT EE, CIS model
AUS, UK model
18
5
6
7
14
EA, MY, SP model
2
CIS model not supplied
8
15
E, PX model
E, MY, PX model
3
4
17
UK model
#3
#1
US, CND, MX model
2
9
#3
T901
AUS model
not supplied
#2
10
16
J901
2
#2
#4
12
1
11
#5
13
#2

Page	Ref.No.	Incorrect	Correct
77	4	1-575-784-11 WIRE (FLAT TYPE)(13 CORE)(CIS)	1-575-672-11 WIRE (FLAT TYPE)(13 CORE)(CIS)
	8	∗ 3-703-244-00 BUSHING (2104), CORD (EXCEPT E,PX,JE)	∗ 3-703-244-00 BUSHING (2104), CORD (EXCEPT E,PX,MX)
	8	∗ 3-703-571-11 BUSHING (S) (4516), CORD (E,PX,JE)	∗ 3-703-571-11 BUSHING (S) (4516), CORD (E,PX,MX)
	9	∗ 1-652-291-11 TRANSFORMER BOARD	∗ 1-653-104-11 TRANSFORMER BOARD
	10	∗ 1-652-294-11 TRANSFORMER RELAY BOARD	∗ 1-653-106-11 TRANSFORMER RELAY BOARD
	17	——————	3-704-515-11 SCREW (BV/RING)
	18	——————	4-965-816-11 CASE

- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

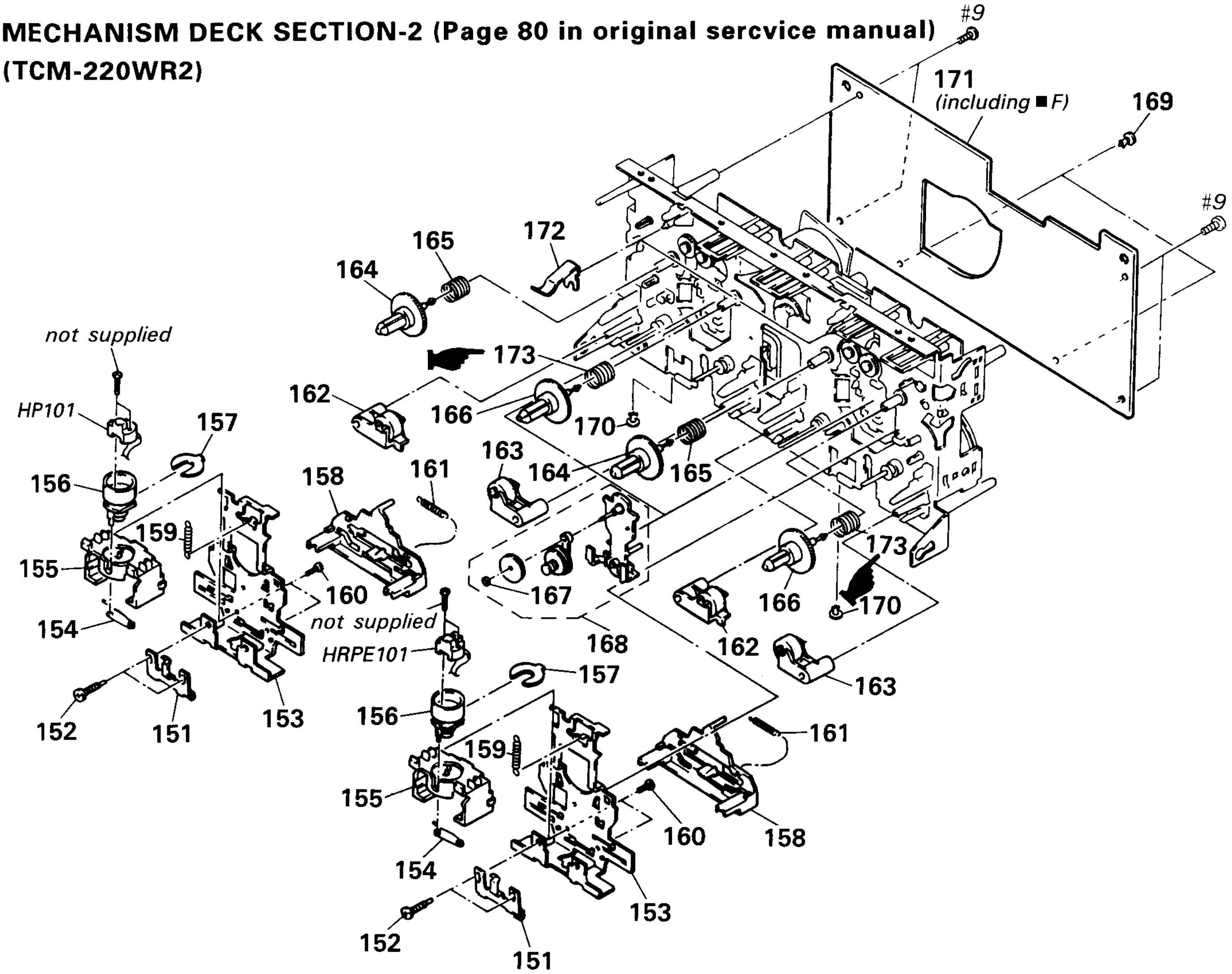
CHASSIS SECTION (Page 78 in original service manual)


not supplied
#6
62
TCM-220WR2
#6
61
71
#5
57
(including 52)
61
CDM33-5BD3B
56
60
#5
#5
61
55
59
not supplied
61
not supplied
63
58
64
54
67
65
61
53
68
66
not supplied
61
52
51
61
#2
#2
#2
69
70
#2

Page	Ref.No.	Incorrect	Correct
78	51	∗ 1-652-279-11 TC FUTA BOARD	∗ 1-652-284-11 TC FUTA BOARD
	62	∗ 1-652-292-11 VOLUME BOARD	∗ 1-653-105-11 VOLUME BOARD
	64	∗ A-4369-795-A TC SW BOARD, COMPLETE	∗ A-4371-702-A TC SW BOARD, COMPLETE
	68	∗ 1-652-281-11 HP BOARD	∗ 1-652-286-11 HP BOARD
	69	∗ A-4369-797-A CD SW BOARD, COMPLETE	∗ A-4371-704-A CD SW BOARD, COMPLETE
	70	1-765-503-11 WIRE, (LAT TYPE)(19 CORE)	1-765-503-11 WIRE (FLAT TYPE)(19 CORE)

- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

MECHANISM DECK SECTION-2 (Page 80 in original sercvice manual)
(TCM-220WR2)


#9
171
(including ■ F)
169
#9
165
172
164
not supplied
173
HP101
162
157
166
163
161
156
158
164
170
165
159
155
173
160
167
166
170
154
not supplied
HRPE101
168
162
157
163
152
151
153
156
161
159
155
160
158
154
153
152
151

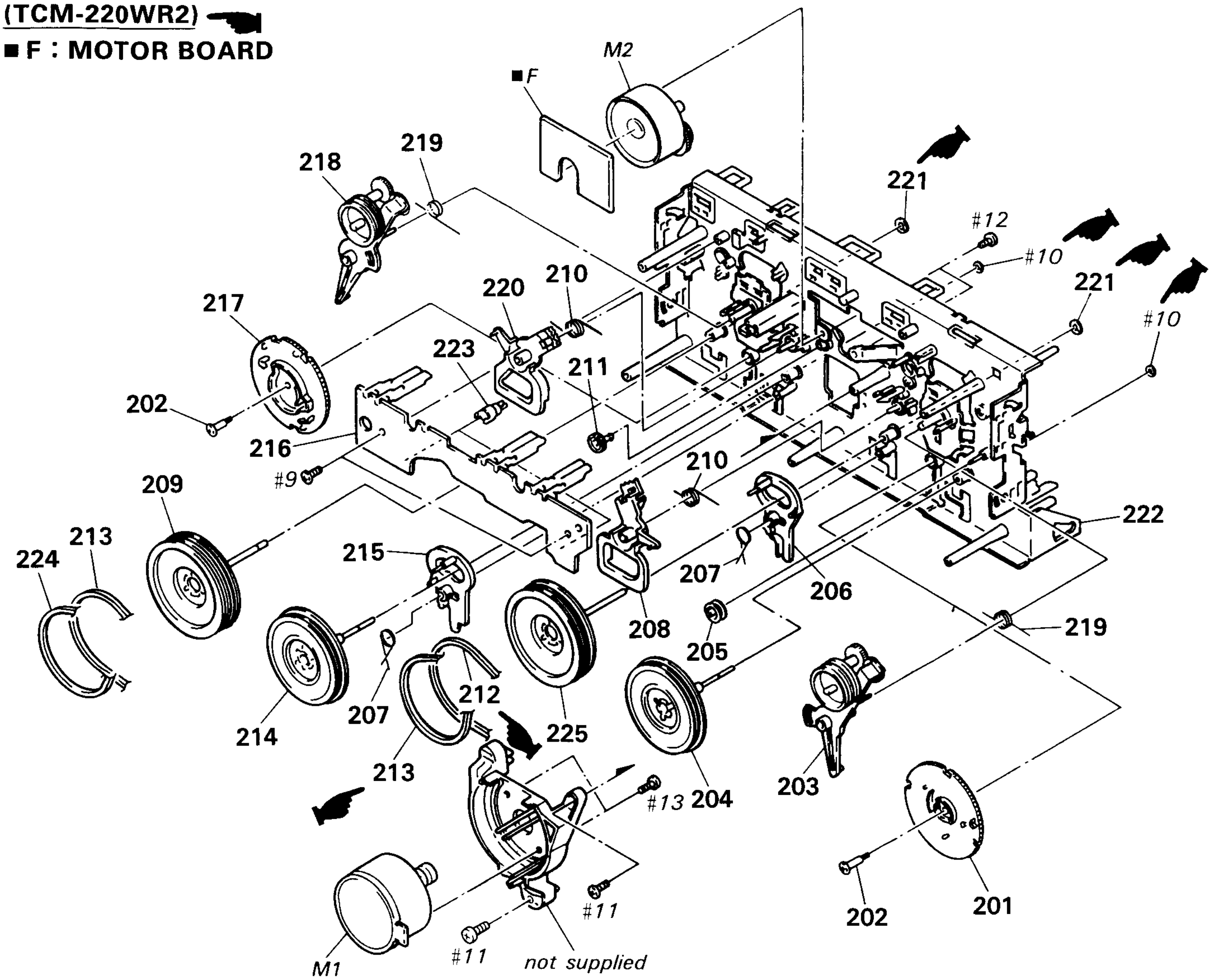
Page	Ref.No.	Incorrect	Correct
80	159	3-908-602-01 SPRING (HEAD), TENTION	3-917-143-01 SPRING, TENTION
	165	3-908-596-01 SPRING (REEL), COMPRESSION	3-917-141-01 SPRING, COMPRESSION
	168	X-3367-592-2 TU ASSY	X-3369-315-1 TU ASSY
	173	———————	3-917-142-01 SPRING, COMPRESSION

- Items marked "＊" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

MECHANISM DECK SECTION-3 (Page 81 in original service manual)

(TCM-220WR2)

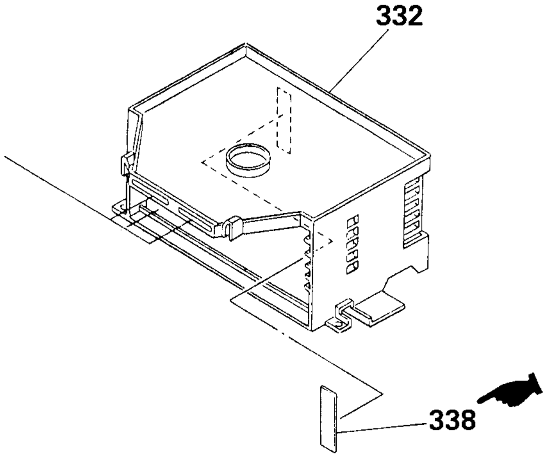
■ F : MOTOR BOARD



M2
■F
219
218
221
#12
#10
221
#10
217
220
210
223
211
202
216
#9
209
210
222
213
224
215
207
206
219
208
205
212
207
214
225
213
#13
204
203
202
201
#11
#11
M1
not supplied

CD MECHANISM SECTION-2 (Page 83 in original service manual)

(CDM33-5BD3B)



Page	Ref.No.	Incorrect	Correct
83	338	————————	* 4-967-859-01 CUTION

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

ELECTRICAL PARTS LIST

Incorrect				Correct	
Page	Ref.No.	Part No.	Description	Part No.	Description
88		∗ A-4369-797-A	CD SW BOARD, COMPLETE	∗A-4371-704-A	CD SW BOARD, COMPLETE
92		∗ 1-652-281-11	HP BOARD	∗1-652-286-11	HP BOARD
106		∗ 1-652-279-11	TC FUTA BOARD	∗1-652-284-11	TC FUTA BOARD
		∗ A-4369-795-A	TC SW BOARD, COMPLETE	∗A-4371-702-A	TC SW BOARD, COMPLETE
107		∗ 1-652-279-11	TRANSFORMER BOARD	∗1-653-104-11	TRANSFORMER BOARD
		∗ 1-652-294-11	TRANSFORMER RELAY BOARD	∗1-653-106-11	TRANSFORMER RELAY BOARD
		∗ 1-652-292-11	VOLUME BOARD	∗1-653-105-11	VOLUME BOARD
108	4	1-575-784-11	WIRE (FLAT TYPE)(13 CORE)(CIS)	1-575-672-11	WIRE (FLAT TYPE)(13 CORE)(CIS)
	70	1-765-503-11	WIRE, (LAT TYPE)(19 CORE)	1-765-503-11	WIRE (FLAT TYPE)(19 CORE)

Page 1 in original service manual

Tape deck Section	Model Name Using Similar Me chanism	NEW
	Tape Transport Mechanism Type	TCM-220WR2